NORTH STAR PATHWAYS

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Artificial intelligence prompt completion by dalle mini

Navigating **AI in College**

Artificial intelligence, or "AI," has gone from a science fiction concept to a commonplace tool in a matter of a few years. Looking at Google's Ngram Viewer, a tool that measures how often a phrase or term is used in books and online, the discussion around AI has skyrocketed. For a student entering college, AI poses a number of different opportunities and challenges. It is important to navigate its use. This essay will help you understand how AI is going to be used in college, what students can expect and some critical Dos and Don'ts of AI.

Students can expect AI to be used in virtually every aspect of college, from being advertised to, the application process, curriculum selection, and even grading. For instance, according to Derek Newton of The Hechinger Report, a publication that focuses on educational fairness, even the texts and emails you get from schools are crafted by AI to get a response from you

Some of this will hardly be noticeable to students and will often benefit them. For instance administrators will be freed up to handle students and their concerns given that much of the "busy work" can now be automated. However it will also be used in more serious situations. For instance many colleges use services like Kira Talent to evaluate applicants' personality traits to measure whether they will be a fit for the school.

Artificial Intelligence

Additionally many of the online teaching assistants will be run by AI programs rather than by human beings. Hypothetically this will lead to less errors and more availability, as well potentially lower tuition due to less costs. However even if true, it may come with the issues common to computers and other machines: system errors. For instance an AI bot named Lola did answer student questions correctly more than 91% of the time. However that means it also gave 3,200 incorrect answers. The lesson here is that while using AI can be helpful it also can come with serious costs and should not be a replacement for human effort. While students can expect AI to be nearly everywhere in college, using it to the detriment of their own reasoning and writing ability is a major pitfall to avoid.

One of the major benefits that students should take advantage of is the ability to automate tasks that may take up too much of their time so they can focus on getting the most out of their studies. For instance AI can help with research and even accessing intelligent tutoring systems for classes where they may be having difficulty. Asking a professor or resources at your school will be a great start on how you can best access this important tool.

However one of the absolute Don'ts of artificial intelligence is cheating and plagiarism. This is something that isn't new but schools are becoming extremely aware of how AI tools can be abused. Professor Matt Hickey explains, "The issue of integrity about passing off work that's not my intellectual property is not new. That's an eternal challenge for higher education. ChatGPT makes it a bit more interesting, but it's the same old problem wearing a new outfit of shiny technology."

So while academic dishonesty is not a new problem, new technology can definitely be a big temptation for some students. Not only does academic dishonesty undermine your own education – you aren't learning how to write, think, or hone your skills in the class you paid for – but comes with a serious risk of poor grades and even expulsion. Educators are getting better and better at circumventing students' ability to use AI to plagiarize and cheat. For instance, ChatGPT also has a tool for schools to detect AI generated text. Professors are also bypassing ChatGPT by generating their own essays, complete with factual errors, and then assign them to students for correction. A great example of this is Professor Matthew Simmons of University of South Carolina, who will have ChatGPT create an essay with errors on it already, requiring the students to correct those errors in a second draft. This eliminates the ability to use ChatGPT and forces the students to deeply understand the course material in order to get credit.

All in all, AI will continue to shape your student experience in college. As schools and students both use it more, you can expect your entire experience, ranging from research and applications to homework and navigating administration. In many ways, your time in college can benefit from AI technology. For instance you can eliminate busywork, get advanced tutoring, and hone research skills by using AI. However it does come with major risks like the temptation to avoid work by plagiarism. As always, your professors and school will be a huge resource on how to best navigate this growing trend. Some questions for you and your class to discuss can be:

- How could AI help your college research and applications process?
- What are some other benefits of artificial intelligence for schools and students?
- What are some other drawbacks?
- How can students best avoid plagiarism pitfalls?

Overview
Culinary Institute of America

The school was founded in 1946 in New Haven, Connecticut, as a vocational institute for returning veterans of World War II. With a growing student body, the school purchased a former Jesuit novitiate in Hyde Park in 1970, which remains its central campus.

Culinary Institute of America

The school began awarding associate degrees in 1971, bachelor's degrees in 1993, and master's degrees in 2018. Additional campuses were opened in the following years: St. Helena in 1995, Texas in 2008, Singapore in 2010, and Napa in 2016.

Overview: Culinary Institute of America: Where Culinary Dreams Take Flight

Aspiring chefs, food scientists, and hospitality experts: this one's for you! Regarding culinary excellence, there's no place like the Culinary Institute of America (CIA). Established in 1946, the CIA is the cornerstone of global culinary education. With vibrant New York, California, and Texas campuses and a location in Singapore, the institute offers a gamut of courses from associate degrees to master's programs.

The Campuses

Studying along the Hudson River in Hyde Park, New York, where the traditional college experience meets world-class culinary training. Or perhaps you are drawn to the wine havens of St. Helena and Napa, California, where food and wine are as natural a pairing as knife and fork. CIA also has a campus in the bustling San Antonio River Walk in Texas and an international location in Singapore in partnership with the Singapore Institute of Technology. Each campus has its unique flavor, but all share the same commitment to culinary excellence.

Program Duration and Structure

Programs at the CIA typically last from 21 months for associate degrees to four years for bachelor's degrees. The academic year is divided into semesters, and depending on the program, you could be looking at 60 to 120 credit hours. Various campuses offer different specializations so that students can choose based on their interests.

Curriculum

CIA shares beyond cooking experience; it's about understanding food in its entirety. Their programs span Culinary Arts, Food Business, Hospitality, and even Applied Food Studies. No matter your culinary passion, there's a course that suits your appetite. You'll even get to work in the institute's nine award-winning public-service restaurants for a semester; that's what you call hands-on experience!

RochelleCIA

Yuma tops culinary competition

US Navy Culinary Institute graduates12 Sailors

Accreditations and Job Prospects

Upon successful completion of the program, students are conferred degrees ranging from Associate in Occupational Studies (AOS) to Bachelor's and even Master's Degrees in specialized fields. As for jobs, the institute boasts a high placement rate, often in prestigious establishments. Their career services are robust, helping students secure internships and employment opportunities.

Student Life Beyond the Kitchen

It's a college life peppered with food festivals, industry conferences, and international food trips. Living on a CIA campus means being part of a dynamic community that shares your enthusiasm for food. In Hyde Park, you can join various clubs and sports, and New York City is just a train ride away from those city lights and Broadway nights.

Tuition and Financial Aid

Worried about the cost? Over 90% of CIA students receive financial aid, with over $39 million in scholarships awarded last year. What's more, the internships are paid, allowing you to build your resume and your savings simultaneously.

Rankings and Recognition

While there isn't a Michelin star for educational institutions, if there were, the CIA would undoubtedly have one. The institute's reputation is globally recognized, and its alumni network is over 50,000 strong, featuring industry leaders who often look to hire CIA graduates.

Meet the Alumni and Faculty

Ever heard of Grant Achatz, the modernist chef behind Chicago's Alinea? He's a CIA alum. And let's not forget the faculty; these folks have written the book on culinary arts, 'The Professional Chef' which is widely considered a foundational text in culinary arts.

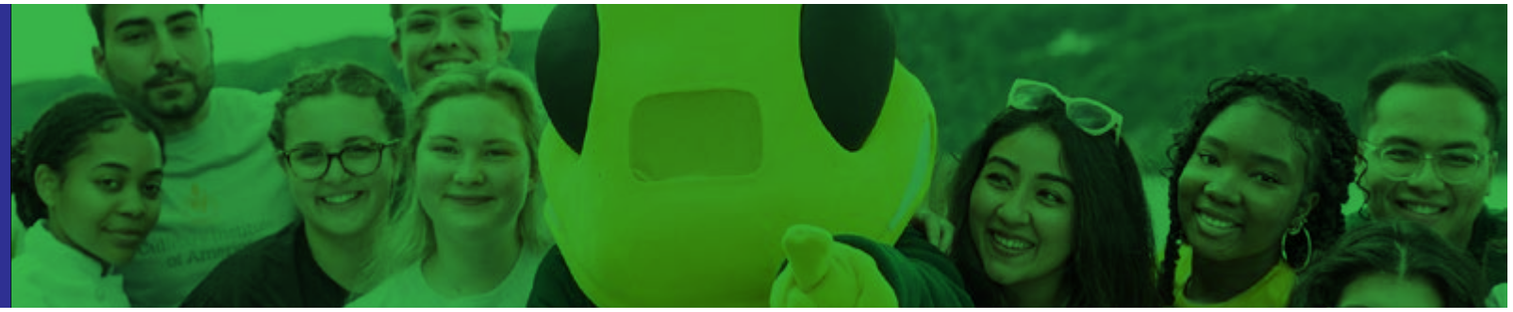
Closing Words

Peyton Spear, a student pursuing a Bachelor's Degree in Food Business Management, put it beautifully, "You can have an hour-long conversation about cakes and not even realize so much time has passed because it's something you and your peers are passionate about." Ultimately, what sets the CIA apart is its commitment to the art and science of food and its larger role in society. It's a movement spicing up the culinary world for over 75 years. So, if you want to whip up a lifetime of opportunities, look no further than the CIA.

Culinary Institute of America Colavita and Roth Hall

Culinary Institute of America

A Student's Perspective



Savannah Soldano-Urbano has been working in the food service industry professionally for 10 years, attended the Culinary Institute of America and has mostly focused her work specializing in pastry decorating.

***Pathways:* What would you do to maximize your time in getting a head start in your field?**
Savannah Soldano-Urbano: First, get any food service job you can and then outside of work, educate yourself on what specific field you want to go into. If you like bread, make, bake and do as much research about the science behind it that you can.

***Pathways:* How can a high schooler prepare for your field?**
Savannah Soldano-Urbano: Definitely a similar answer as before. Do as much cooking and baking in your spare time as you can. Try to challenge yourself by doing more difficult recipes, like a soufflé.

***Pathways:* Are there any mistakes you can think of that a new person in your field or at your school can avoid?**
Savannah Soldano-Urbano: Avoid the mistake of not being coachable or not having the mindset that you're always a student. You can learn so much from others so don't miss out on the opportunity to always be learning.

***Pathways:* What do you see as the future of your field?**
Savannah Soldano-Urbano: For cakes and cake decorating specifically, I see it just continue to grow. More people love to treat themselves for any or no occasion to a beautifully decorated cake, because who doesn't want a treat? Before, you could only really find bakeries that did wedding cakes but now many bakeries are offering individual sized cakes.

***Pathways:* Are there any trends in your field you don't see panning out?**
Savannah Soldano-Urbano: Cookie bakeries, like the bakery Crumble. It's a fad just like cupcakes were in the 2000s.

***Pathways*:What is your average day like?**
Savannah Soldano-Urbano: At my shop my average day is taking inventory and placing orders, doing an inspection of my department and of all my product for quality and checking in with my team. I run more of the business side of things now but if there's ever a call out I have to be ready and willing to cover any shift, even at 3am.

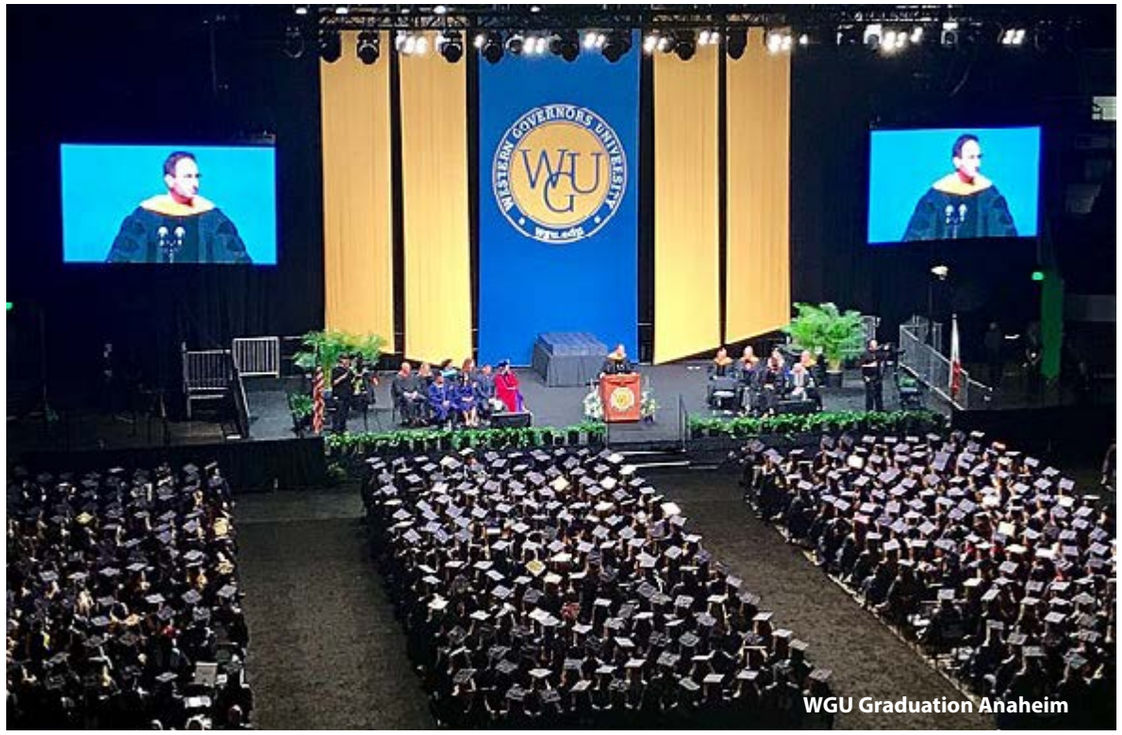
***Pathways:* How long does it take to get established in your field?**
Savannah Soldano-Urbano: To get good it took me about 5 years of doing the same thing every day. For others it can be faster, depending on your specific field. But because it's so hands-on, the skill takes awhile to develop.

***Pathways:* What opportunities do you see for individuals working in your field, or for your field of study at large, to better our society?**
Savannah Soldano-Urbano: I love that through food you are able to educate about other cultures and bring tradition or history to everyday life. There's so much opportunity to use food as education.

***Pathways:* What is one piece of advice you would give to your younger self, while examining your future?**
Savannah Soldano-Urbano: Trust the process.

Western Governors University

WGU was founded in 1997 in the United States by the governors of 19 U.S. states. It was first proposed by then-governor of Utah Mike Leavitt at the annual meeting of the Western Governors Association in June 1995. It was formally proposed the following November, and in June 1996 each



WGU Graduation Anaheim

Should You Attend Western Governors University?

WGU is a different kind of university, being both nonprofit and online, while focusing on majors that can result in the highest potential earnings. For the right kind of student, it can be an effective way to get ahead in the workplace. But is it right for you?

Quick Facts:

Western Governors University (WGU) is a private, non-profit online university founded in 1997 by governors of 19 different U.S. states. It was proposed as a way of launching a new competency-based learning university to assist the residents of those states in their educational and career prospects. With over 3,900 faculty and nearly 6,000 additional staff it serves over 150,000 students. A rapidly growing alumni body, over 214,000 students have graduated from its graduate, undergraduate and professional courses.

Costs:

WGU has a lower cost than most similar universities, which is in part why it was founded. The average annual cost is $11,835. $7,000 of this is tuition alone, the rest being calculated in books, fees or off campus housing. In 2020, WGU awarded 14,743 scholarships valued at just under $20 million.

Student Life, COVID Policy & Extra-Curricular Offerings:

As an entirely online university, WGU does not have many of the amenities of a college with an on-campus experience, which would include clubs, athletics, and an on-campus COVID policy.

ROTC & Military Resources:

As an online university, the school does not have an ROTC program for students. However it does have resources for military students through its Virtual Resource Center and its Peer Support Program. Through its Operation Career, it helps military students get their undergraduate and graduate degrees.

Return on Investment:

For a student who is looking for a specialized education there can be a major return on investment. Due to low levels of tuition costs and debt, it can be relatively easy to come ahead financially from the improvement of earnings. A graduate of WGU earns 80% more than a worker than a high school diploma alone. The median earnings of a former student after 10 years from enrollment was over $52,000, which is slightly above average for four year schools. Though unranked by the U.S. News & World Report, it has been ranked by several organizations as one of the most innovative schools and one of the most military friendly schools. For students who want to specialize in professional education like information technology and nursing, WGU

ranks #2 and #16 from Niche.com. In 2015, the National Council on Teacher Quality (NCTQ) rated WGU's secondary teaching program highest in terms of teacher education.

Notable Alumni:

Though founded in the 1990s, the university has already produced a long list of notable alumni.

- Michael Capps, a former member of the Kansas House of Representatives.
- Sarah Fisher, a former professional race car driver in both the Indy Racing League and the NASCAR West Series.
- Chaunté Lowe, a four time Olympian.
- Sami D. Said, a retired general in the United States Air Force and former Inspector General of the Department of the Air Force.

Is It Worth It?

Before you commit to any college, you should count up both the tuition cost and opportunity cost. The yearly tuition for WGU is considerably lower than many alternatives. For the cost, it provides a quality education with a high return on investment. Part of this value can be seen in the high rankings for specialized and practical education in sectors that pay well. That being said, WGU does lack the "traditional" college experience that comes with life on campus, which of course is more expensive than an online education. Some questions you should ask yourself should be, "What do I want out of college? Do I want an experience with friends or do I want to get more of a heads up on my future career?" Answering this question will help you find out which college is the best fit for you.

Western Governors University

Georgia Institute of Technology

The Georgia Institute of Technology (commonly referred to as Georgia Tech and GT or, in the state of Georgia, as Tech or the Institute) is a public research university and institute of technology in Atlanta, Georgia. Established in 1885, it is part of the University System of Georgia and has satellite campuses in Savannah, Georgia; Metz, France; Shenzhen, China; and Singapore.

Georgia Institute of Technology

Commonly referred to as Georgia Tech, and located in the heart of Atlanta, this beautiful university was founded in 1885. This is a public school, as well as one of the top research universities in the country. Georgia Tech has many unique and significant offerings, and can be an incredible choice for many students, but is it right for you?

Quick Facts:

The school was founded as part of reconstruction after the Civil War, to help build a new and viable economy in the south. It has a history of being an economic driver in the region and worldwide and it works to build on that history with an eye on the future. It has very highly ranked engineering and computer science programs, with a focus on STEM subjects. Overall it was ranked 69th in the QS World University rankings in 2019. Its rankings for STEM subjects are higher ranging anywhere from 8th in statistics and operational research to 12th in mechanical engineering. Additionally, it features a plethora of research funded by private grants, beyond the public funding and tuition. Lastly, in addition to the main campus in the heart of downtown Atlanta, it has satellite campuses in Savannah, GA and internationally.

Costs

The cost is not overwhelming, especially in comparison to other elite universities. The full cost of tuition is $20,000 but the average student pays $14,820 all in, when student aid and scholarships are factored in. The out of state full cost is $32,876 whereas the in state cost is $11,764. The average needs based package from the school comes out to $15,828.

Student Life

Georgia Tech is incredibly challenging academically, requiring a disciplined and rigorous approach to your studies. This is reflected in a 17% acceptance rate. However, unlike many schools that are its equal academically, such as CalTech, CalPoly, or MIT, there is also the classic college experience that is enhanced by having not just large-scale college sports but being a member of a Power 5 football conference. There are a variety of options open for students with over 350 student organizations and 50 registered Greek organizations on campus. There is also an Army ROTC on campus, expanding the range of what students can get out of the experience.

COVID Policy

Georgia Tech has a policy of voluntary isolation and testing for students who test positive or feel like they are symptomatic. For students and staff they have a comprehensive guide for how to navigate a return to campus. The university also will provide free COVID-19 vaccines for students through its Stamps Health Services.

ROTC

Georgia Tech has a variety of military initiatives in order to offer scholarships to those who wish to serve or are currently serving in the US military. It currently offers three separate reserve officer training corps; the Army ROTC, the Air Force ROTC and the Navy ROTC. Jay Fluet, a cadet in the Georgia Tech Army ROTC recommended it, “One of the best skills you can gain from the Army is how to lead a group of your peers, and getting to share what I’ve spent three years learning and developing felt like coming full circle.” Georgia Tech also offers a host of resources to veteran and currently serving students.

Extra Curricular Offerings

There are over 350 organizations on campus, really covering any and all interests a student may have. From student government and leadership positions, to student run media, and Greek Life, the traditional college options are all available. Additionally, many scientific and math clubs are available, from the truly niche like the Acoustical Society of America, to basic campus living groups, such as support for first year students. There are groups built for African American undergraduates, and African American graduate students, there are Jewish Greek organizations, and co-ed business fraternities. Truly all interests have a home in campus life. Additionally, the school helps set up student run events, and even has multiple volunteer opportunities.

Return on Investment

Currently Georgia Tech’s graduation rate is 56%. According to the National Student Clearinghouse Research Center (NSCRC), the college graduation rate in 2022 was about 63% for all schools, making them slightly below average. However while the average student in the United States leaves with an average of $33,000 in debt, the average Georgia Tech student leaves with $27,000 in debt on average. Students who graduate from the main campus usually make around $62,000 which increases to $82,000 10 years after graduating. For students who specialize in STEM majors, this increases to $85,000 on average. By contrast the average graduating student usually will make around $58,000.

Notable Alumni

The school boasts many famous alumni, including numerous athletes such as Calvin Johnson, Chris Bosh, and Nomar Garciaparra. Comedian Jeff Foxworthy is an alumnus. Multiple astronauts have graduated from Georgia Tech such as John Yong and Timothy Kopra, and even former US President Jimmy Carter.

Is It Worth It?

Before you commit to any college, you should count up the cost. The yearly tuition of USC. That being said, USC is consistently ranked in the top technical schools of the United States. While not located in New York or Los Angeles, Georgia Tech is located in a growing hub of culture. The question you should ask yourself is, “Can I make this time worthwhile for me?” Given its selectiveness and cost, prospective students need to weigh not just the cost of attending but the opportunity cost of pursuing this school over others.

Secretary Blinken Delivers a Commencement

Georgia

Georgia Institute of Technology Historical District

Cooper Union by David Shankbone


FSP UX MN


Cooper Union SatPro

The Cooper Union for the Advancement of Science and Art

The Cooper Union for the Advancement of Science and Art (Cooper Union is a private college at Cooper Square in New York City. Peter Cooper founded the institution in 1859 after learning about the government-supported École Polytechnique in France.

Cooper Union- An Educational Legacy in New York

Nestled on the cusp of Manhattan's East Village, a mere stroll from the famed Washington Square Park and the cultural hubs of Greenwich Village stands a beacon of excellence: The Cooper Union for the Advancement of Science and Art. A testimony to Peter Cooper's vision, the institution exemplifies an unyielding commitment to diversity and equitable access to education.

A Glimpse into Cooper's Past

Founded in 1859 by the industrialist and philanthropist Peter Cooper, this esteemed establishment ranks among the nation's oldest academic institutions. Envisioned as a catalyst for personal growth and civic virtue, Cooper Union shone as a revolutionary light from its inception. Peter Cooper's dedication saw the institution embrace women, men, and people of all colors equally. The history reverberates with tales of immigrant children like Justice Felix Frankfurter seeking solace and knowledge amidst its walls.

Moreover, the Great Hall in the Foundation Building's basement became a pivotal space for discourse, making history when Abraham Lincoln delivered his renowned "Right makes might" address. This speech, marking Lincoln's debut in New York, resonated across the nation and played a significant role in his ascendancy to the presidency.

Academic Excellence and Notable Programs

Cooper Union boasts of a proud all-honors academic tradition, emphasizing the importance of fair access. Undergraduates have a spectrum of programs, be it a five-year Bachelor's of Architecture, a dynamic Bachelor's of Fine Arts with avenues in photography, sculpture, and more, or a Bachelor's of Engineering in multiple disciplines. For those looking at postgraduate studies, there's the Master's of Science in Architecture and a range of Master's of Engineering programs tailored to foster in-depth expertise.

Life at Cooper Union

With a community comprising fewer than 1,000 students, Cooper Union seamlessly blends a close-knit academic environment with the vast cultural backdrop of New York City. Students immerse themselves in rigorous academic pursuits and engage with an eclectic mix of theaters, galleries, and eateries in the vicinity.

On campus, the Office of Student Affairs curates an enriching experience, ensuring students access wellness resources, housing facilities, and various clubs. In fact, each year witnesses the emergence of new student-led initiatives, ranging from professional organizations to dance clubs, all culminating in the vibrant Fall Festival.

Tuition and Financial Aid

Financial accessibility remains a cornerstone of Cooper Union's mission. Every admitted undergraduate student is awarded a half-tuition scholarship appraised at $22,275 annually. Cooper Union's financial aid office works diligently to assist families and students in navigating the nuances of educational expenses. Their commitment to facilitating affordable quality education stands unwavering, ensuring that financial constraints never hinder a deserving student's ambition.

Security on Campus

Safety is paramount at Cooper Union. With round-the-clock security, students, faculty, and visitors can feel at ease, knowing they are in a secure environment. The institution's proactive approach sees a detailed log of incidents, ensuring timely responses and continued tranquility on campus.

Conclusion

With its rich history and commitment to academic excellence, the Cooper Union for the Advancement of Science and Art stands as a testament to Peter Cooper's dream. Cooper Union beckons for high school students and their guidance counselors seeking a transformative educational experience in New York City.

Saran Wrap March For Transparency at the Cooper Union

class1

DEEP SPRINGS COLLEGE

Deep Springs School
California's Distinctive Academic Retreat

Deep springs students

Nestled in the serene valleys of California, Deep Springs College stands as a testament to innovative higher education. This academic haven, away from the hustle and bustle of urban settings, offers an immersive experience that merges rigorous scholarship with community living. For those high school students seeking a college journey that goes beyond conventional classroom walls, Deep Springs awaits.

College Overview

Situated 40 miles from Bishop in the secluded Deep Springs Valley, this college was founded in 1917. Its annual intake of 12 to 15 students ensures a focused and personal academic setting. Everyone admitted receives a full scholarship, showcasing the college's dedication to accessible, high-quality education.

Acclaimed Curriculum

With a limited student intake, the curriculum here is rigorous. Nine diverse courses are typically offered, encompassing humanities, social sciences, and natural sciences. Notable mentions include intricate topics like 'The Special Theory of Relativity' and 'Art and Politics in Twentieth-Century China.' While introductory courses are available, the discourse often reaches graduate-level depths, pushing students to think beyond the ordinary. Additionally, students can venture into independent or directed studies, subject to committee approval.

Vibrant Student Life

Life at Deep Springs isn't limited to classrooms. The unique setting on a cattle ranch means students participate in daily chores and activities related to ranching. There aren't traditional dorms; students live communally on the college ranch. Tanner Loper's account underscores the depth of this experience, with his journey from navigating seminar-style classes to finding his voice. He highlights the daily "cooperative quest for philosophical discovery" and the value of learning to live "'cooperatively and considerately in a diverse political community." While traditional athletic teams or fraternities are absent, the college focuses on building community through labor and shared responsibilities. The picturesque valleys and mountains offer solitude and reflection, as beautifully narrated by student Lana Mahbouba.

> Due to the smallness of the Deep Springs community, my classmates and I are in consistent contact. We rub against each other, and eventually smooth one another out. I soon realized that no matter where our relationship was, these people would always be there for me when I needed support, and I should do the same for them a thousand times over. At Deep Springs, you can't block someone you dislike. And so the next best thing is to hike out far enough from campus and face the other direction. Standing alone against the wind and mountains provides a visceral reset. Our greatest challenge lies in building unconditional self worth in order to be a better community member to these people.

Deep Springs School


DEEP SPRINGS

When I returned for my second year, I kissed my classmates' heads after I braided their hair during student body meetings. I know that these people are family. Through repetitive contact, I came to understand them. And in understanding them, I see the goodness in them. When my humanity disgusts me, they hold me. And in the desert valley dip, the Inyo-White Mountains hold us. I hope to internalize the spaciousness and quietness of the valley and mountains of my current home to give to those I meet post Deep Springs. Where we are is who we are—and for me, I became a woman amidst our mountains.

Tuition and Financial Assistance

Every student at Deep Springs is on a full scholarship, covering tuition, accommodation, and board. In return, the commitment to serve humanity is instilled, reflected in their academic and labor contributions.

Rankings

Deep Spring's model, based on size and ethos, means it might not always appear on standard ranking systems. However, its stature and repute are unparalleled within academic and intellectual circles.

Distinguished Alumni

From this compact institution, many have made significant marks in fields as varied as politics, journalism, agriculture, and more. Jesus Munoz, from DS15, elucidates the transformative power of Deep Springs. He came from an inner-city public school with a narrow view of higher education. But Deep Springs reshaped his perspective, teaching him that "scholarly knowledge is not enough for a wholesome education." He adds that the institution "gave a new meaning to my studies, one that teaches me to find joy in learning, even in times of adversity." Deep Springs alumni are known for their professional achievements and service to humanity, an ethos instilled during their college years.

Additional Distinctions

While no Nobel laureates currently grace its faculty, Deep Springs boasts educators who are front-runners in their disciplines. With resources like a well-equipped science lab, an expansive library, and archives rich with local historical materials, students are well-armed for deep intellectual pursuits.

Conclusion

Deep Springs College offers more than just a degree. It's a journey of self-discovery, intellectual rigor, and commitment to the broader good. As Tanner Loper sums it up, "While there are challenging times, each experience makes you a little more assertive and better prepared for whatever comes next." It beckons as a Californian gem for those seeking a profound academic experience.

DEEP SPRINGS EXT

Ask A Software Developer

What is a Software Developer: Software developers work in software programming and design to build software which has a lot of different applications. Usually they will work on a specific software to be built, tested and deployed for a specific purpose. Though initially associated with coding, video games or phone apps, this is a job that deals with virtually every industry that uses computers on any level.

Software developers can expect to work remotely or in office on any number of tasks such as; working with clients on their specifications, designing software architecture, coding, testing and debugging.

Careers in Software: Software provides a lot of different careers, in particular developers, quality assurance analysts, and testers. Since programming knowledge and languages are used so commonly in so many sectors, software professionals can work for a variety of different companies, usually software engineering companies, large corporations and a lot of innovative start ups.

Normally, the fastest way to become a software developer is to get a related bachelor's degree and in particular to get a related master's degree. However there are ways to become a software developer without a degree from a four year institution. There are a lot of courses, software engineering bootcamps, and prep courses.

Salary: As of 2022, the median salary for a software developer is over $127,000 however the median salary for software development analysts and testers was closer to $99,000.

Trends in Career Field: Software development is a field where there is a lot of growth expected. For instance the Bureau of Labor Statistics in 2022 projects that the field will grow by 25% from 2022 to 2032, which is higher than the average for most other sectors.

Interview From The Field

Aly Talante is a software engineer who works for a Software As A Service (SaaS) startup focused on creating software to help car dealerships track leads and market their vehicles to potential customers.

Pathways: What would you do to maximize your time in getting a head start in your field?

Aly Talante: I had already started learning some basic coding in junior high, but I didn't develop or maintain those skills throughout junior high and high school. I

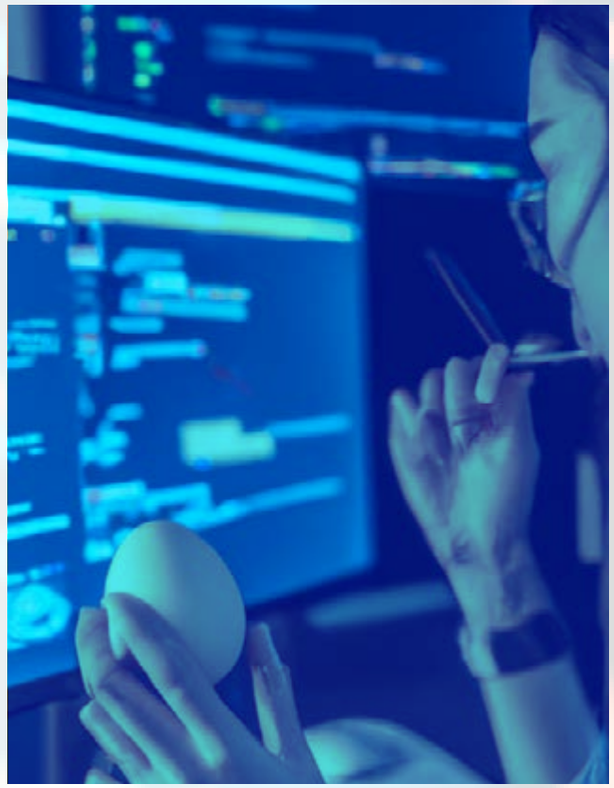
Ask A Software Developer

2012 FIRST Robotics Competition Palmetto Regional

think choosing to actively continue developing those skills during this time period would have given me a huge head start. There are many coding programs focused on high school students in particular, and I strongly suggest engaging with them if you are considering Software Engineering.

***Pathways:* How can a high schooler prepare for your field?**

Aly Talante: There are countless free and paid resources which can help you begin to prepare for a career in software engineering. YouTube is full of well made, multi-hour courses that can introduce you to the most foundational aspects of coding. If you struggle with self-directed learning, many community colleges offer coding camps that high school students can enroll in. The most important thing you can do is code regularly. You don't have to be building anything complex, but if you are exercising your brain with coding tasks on a regular basis, you will have a great head start. Think of a game you might like to build or a personal project you are interested in and do it!



DALL·E Photos of side view of programmer discovering

***Pathways:* Are there any mistakes you can think of that a new person in your field/at your school can avoid?**

Aly Talante: It is very easy to burn yourself out trying to learn everything. Software engineering is a vast field. There are countless languages you can learn, many different frameworks, and decades of history that you can investigate. When starting off, just focusing on the fundamentals is the most important. As a software engineer, part of your job will be learning about and understanding new technology. Learning to pace yourself with learning and self-teaching is crucial to success.

***Pathways:* What do you see as the future of your field?**

Aly Talante: Software engineering is in an exciting place. Our field is on the cutting edge of creating technology that people use in their everyday lives, and I don't see that changing any time soon. The internet and computers have only become more central to people's lives, and I suspect our field will continue to play a central and exciting role in society.

***Pathways:* Are there any trends in your field you don't see panning out?**

Aly Talante: A big trend right now is Artificial Intelligence. I have worked closely with AI in a professional context, and I think people are overstating how powerful it is. It is absolutely an immensely powerful tool for certain uses, but it is really terrible at certain tasks people try to apply it to. AI will be a part of technology from here on out, but I don't think it is going to be the next big thing that everyone predicts. Its role will be limited, but important.

***Pathways:* What is your average day like?**

Aly Talante: On an average day, I have an initial standup meeting in the morning where I report yesterday's activities to my engineering team and report my plans for the day. I usually have a pretty even split between coding and meetings in my day. Coding time is about a 70/30 split between building out new features for my team and fixing bugs. When not coding, I am usually in meetings. These meetings can be planning meetings where myself and other engineers get together to develop new product ideas, or they can be more basic organizational meetings for our company to review finances, current project initiatives, and more.

***Pathways:* How long does it take to get established in your field?**

Aly Talante: The hardest part with software engineering is getting in the door. Once you land your first job, you can expect to get established fairly quickly if you are good at what you do. Moving from a junior engineer to a full engineer is the biggest hurdle to getting fully established, and most engineers spend 1-2 years as junior engineers before being promoted. Once you attain the role of a full software engineer, you have many opportunities within the field and can consider yourself well established

***Pathways:* What opportunities do you see for individuals working in your field, or for your field of study at large, to better our society?**

Aly Talante: One of the tricky things about working in software is that our industry has a pretty big responsibility to make sure we are building products that are socially beneficial and ethically sound. People interact with technology every day which means we can cause great harm if we are not careful about what we build. Conversely, we can also do exceptional good by producing technology that improves people's lives. Software can be developed for many uses, such as enabling environmental cleanup efforts and making information more available to those who are lacking it. The work we do can definitely better society.

***Pathways:* What is one piece of advice you would give to your younger self, while examining your future?**

Aly Talante: For the longest time I thought I could not do software related work. I considered myself subpar at mathematics, insufficiently analytical, and ill suited for a STEM field. The advice I would give my younger self is to reject those doubts and to pursue software anyway. While much of software engineering is math intensive, there are plenty of subdisciplines (such as Web Development) which use very little math. Additionally, the analytic skills needed for software engineering can be learned over time; most people are not born with them

A female programmer writing Java code with JUnit

ASK A SOFTWARE DEVELOPER

Ask An Engineer

What is an Engineer: Engineers are individuals who create, design, and maintain different machines, data systems, complex structures, and gadgets in order for them to meet their functional requirements. In addition to functionality, engineers must take into consideration the safety, cost, and practicality of the product or system they are working on. The main goal of an engineer is to figure out how the thing they created can solve real-world problems.

Careers in Engineering: There are four main types of engineers; chemical, civil, mechanical, and electrical. Chemical engineers work to design chemical manufacturing processes. To do well in chemical engineering, one would need a strong background in chemistry and physics. Civil engineers work on the design and maintenance of building and infrastructure projects. Being a civil engineer requires a strong background in all types of math. Mechanical engineers create power producing machines such as elevators and air conditioning units. It is considered one of the hardest areas of engineering to major in due to the technology, science, and math requirements of it. An electrical engineer designs and tests electrical equipment such as motors and navigation systems, and many electrical systems in airplanes and cars. This type of engineering requires the most abstract thinking.

Salary: All types of engineers earn a substantial salary, most of whom make double what the median wage in their state is. Of the four main types of engineers mentioned above, electrical and chemical engineers earn the highest wage at an average of just over $100,000 per year. Mechanical engineers make an average of $95,000 per year, and civil engineers make the least of the four, but still earn an average salary of almost $90,000 per year.

Career Advancement: A minimum of a bachelor's degree is required to become an entry-level engineer. Their bachelor's degree must be related to the industry they would like to work in. In order to advance one's career in the field of engineering, additional education, licensure, or both will be required.

Trends in Career Field: Electrical, civil, and mechanical engineering are all expected to experience the greatest job growth in the next ten years, accounting for approximately 140,000 new jobs. Additionally, many senior management-level positions are opening up because many people who hold these positions are projected to retire in the next few years. Lastly, engineering in robotics is on the rise. Since working in robotics requires a high technical aptitude, it is expected that engineers will be hired to fill spots in robotics in the near future.

Interview from the Field

Brian Markus is an electrical engineer who currently works as the Global Account Manager for Onsemi located in Los Angeles, California, where his job is to support many of the largest technology companies in southern California.

How Brian First Became Interested in Engineering: Brian became interested in engineering at a young age because he was always curious how things worked. He would often take apart toys to see if he could put them back together in working condition. He remembers always

being engaged in building things with his hands, such as Legos, and always considered himself to be a problem solver for any issue his mom would find around the house. As he got older, Brian became interested in electronic devices, such as computers and video games, and spent much of his time in high school trying to figure out how they worked. Due to his curiousity in how things worked, especially electronics, he decided to major in electrical engineering in college.

Academic and Career Preparation: After high school, Brian attended the University of Kansas and earned his bachelor of science degree in electrical engineering with a minor in business, in 2015. While he was majoring in electrical engineering, Brain also worked as a shop attendant in the school of electrical engineering where he maintained laboratory test equipment, organized the shop inventory, and provided technical support to other electrical engineering students. During this time, Brian also worked as an intern as an applications engineer intern at Semiconductor Manufacturing Company, the same company he currently works for. As an intern there, he designed and validated buck voltage regulators under strict regulation requirements. Once he graduated college, he continued to work for Onsemi as a systems applications engineer where he specialized in USB Type-C and power delivery as well as DC-DC conversion. Brian then got promoted to a field systems applications engineer three years later where he created substantial field growth for his company year after year. In 2022, he started his current role as the global account manager for the company,

Most Enjoyable Aspect about Work: Brian feels that the most enjoyable aspect about his work is the ability for him to use his creativity to solve problems and to work on projects that improve people's daily lives. He feels his work is engaging and allows him to apply skills he learned in school to his daily work

Least Enjoyable Aspect about Work: Brian's least favorite aspect about being an engineer is that it is an extremely competitive field, so he found it difficult to get a job at first. He also discussed that the hours can be long due to the complex tasks that engineers work on, sh he often has to spend nights and weekends to complete jobs on time.

Recommendation for Entry Level Position: Brian explained that to actually work as an engineer you will need a bachelor's degree, but there are ways to get your foot in the door before that. Brian suggested working for a company that employs engineers but will also hire people interested in becoming an engineer to do tasks such as developing plans and cost analysis for engineering projects, assisting with their administrative tasks related to the engineering projects, and helping to test the product the engineers created.

Advice for Students Interested in Engineering: Brian's advice for students who are interested in becoming an engineer is to gain a strong background in science and math. He said every branch of engineering will require this so it is best to get started on it right away. He explained that as long as you have a strong background in these areas you can figure out which specialization you want to go into at a later point.

Interview From The Field

Saad Dilshad has a B.Sc. degree in Electrical Engineering from the University of Gujrat, Pakistan, and an M.S. degree in Electrical Engineering from COMSATS University Islamabad, Pakistan. Working as a professional engineer, Saad has been published in multiple publications and is currently pursuing a Ph.D. degree in the solar thermal cooling system.

***Pathways:* What would you do to maximize your time in getting a head start in your field?**

Saad Dilshad: A comprehensive time management strategy is necessary to succeed in electrical engineering. This requires a combination of concentrated study in the fundamental engineering specialties, practical experience gained through research projects, internships, and technical instruction. I would also encourage networking at professional gatherings like seminars, conferences, and training sessions, and membership in prestigious engineering connections and student chapters like the prestigious Institute of Electrical and Electronics Engineers (IEEE). Furthermore, it is essential to promote personal development by pursuing certifications in diverse fields and taking advantage of any available learning opportunities.

***Pathways:* How can a high schooler prepare for your field?**

Saad Dilshad: Electrical engineering is a broad field. Especially when seen in the light of modern innovations including Industrial 4.0 and AI, these are the modern outlook of Electrical Engineering, one has to understand the basics of Electrical Engineering before entering these fields. A high-achieving student who wants to succeed in this intricate topic needs to place emphasis on building solid fundamentals in science, math, and computer abilities. By providing them with the skills and information needed to navigate the intricacies and innovations within Electrical Engineering, these disciplines act as the cornerstone, effectively spanning the gap between the field's rich past and its ever-changing obstacles facing today and in the future.

***Pathways:* Are there any mistakes you can think of that a new person in your field/at your school can avoid?**

Saad Dilshad: Electrical Engineering covers around 4-5 fields (Electronics, Control, Communion, Power and Renewable Energy, Computer Systems), Instead of seeking to divide their attention among several subjects, people should make a clear decision and concentrate in each of these areas in order to start an effective profession in this industry. It might be wise for someone to consider other potential careers, including business or the arts, if they find themselves having difficulty with Math and Science, which are prerequisites for Electrical Engineering. In these fields, their talents and passions will more naturally align, guaranteeing a fulfilling and successful professional journey.

***Pathways:* What do you see as the future of your field?**

Saad Dilshad: Due to its crucial role in advancing technology across numerous industries, the future of electrical engineering is still incredibly bright. Notably, industries including electric cars, energy management, robotics, and electronics for consumers are predicted to experience strong yearly increases of at least 10 % over the next ten years, further emphasizing the sector's significance and possibilities.

The leaders of today's corporations, like Jeff Bezos, the man who founded Amazon, Satya Nadella from Microsoft, or Sundar Pichai from Google, for example, all have electrical engineering as their first major. This emphasizes Electrical Engineering's continuing significance as a foundation for inspirational individuals who have created and still affect the direction of our technological world.

***Pathways:* Are there any trends in your field you don't see panning out?**

Saad Dilshad: While it's challenging to predict the future with certainty, some trends in electrical engineering may not pan out as expected due to various factors, including technological, economic, and societal constraints.

- While quantum computing holds great promise for solving complex problems, it's still in its infancy, and widespread adoption may take longer than initially anticipated.

- Although advancements in battery technology continue, the development of batteries with virtually unlimited lifespan and energy density may take more time to realize.

- Achieving superconductivity at room temperature would revolutionize electrical engineering, but current materials and physical constraints make this a challenging goal.

***Pathways:* What is your average day like?**

Saad Dilshad: Currently, I work as a lecturer at a university, where my daily duties include developing instructional materials for students, giving lectures, and taking part in scheduled meetings. Our engineering programs use the OBE framework for outcome-based education.With an emphasis on the real-world abilities and competencies that students should have by the conclusion of their course or program, OBE is a teaching strategy that puts them towards the forefront of their learning experience.

***Pathways:* How long does it take to get established in your field?**

Saad Dilshad: As a fresh engineer, you have to spend around 3-5 years in any progressive industry to get in-depth learning about the electrical needs, working requirements and modern technologies in that specific industry.

***Pathways:* What opportunities do you see for individuals working in your field, or for your field of study at large, to better our society?**

Saad Dilshad: Electrical engineering offers numerous opportunities for individuals to contribute to the betterment of society. The field is critical in addressing some of the world's most pressing challenges, like climate change, water pollution, and medical issues. Electrical engineering can positively impact society through renewable energy technologies, electric and autonomous vehicles, medical devices and healthcare advancement, communication and connectivity, IoT technologies, cybersecurity and data privacy, and clean water and sanitation technologies.

***Pathways:* What is one piece of advice you would give to your younger self, while examining your future?**

Saad Dilshad: I would advise my younger self to choose a large industry rather than a small industry and work hard towards life goals. In the present world, in which we have more online working opportunities like electrical design projects, work from home, coding and freelance technical writing, such opportunities were not there ten years back. I started freelancing technical writing very late in 2020, after seven years of graduating in Electrical Engineering.

Ask A Geologist

Two women geologists at work in Fosdick Mountains,_2005-6

What is a Geologist: Geology is a field with a wide range of potential applications so there are a lot of different job positions and specializations. Geologists use technical background in physics, geological science, mathematics and technical writing in order to gather and analyze geological data, prepare and present reports for non-experts, conduct field experiments, or identify potential geological hazards.

Careers in Geology: Becoming a geologist will definitely require a geology degree from a four year institution. Most geologists will go on to get a graduate degree in geology or in a field specializing in their specific niche, either a master's or a full doctorate. Additionally there are several professional certificates and licenses geologists can attain like the Certification for Petroleum Geology from the American Association of Petroleum Geologists (AAPG) Division of Professional Affairs. Once you've gotten the necessary prerequisites, there's a lot of different specialties and careers you can focus on in geology. such as a geochemist, a geology professor, a hydrogeologist, or a geological surveyor, among many others.

Salary: According to the Bureau of Labor Statistics as of 2022, the median salary for a geologist was $87,000, though there will be some range across the field. Working for a private company like an energy company will likely pay significantly more than the public sector or a university.

Trends in Career Field: The geology field is expected to grow 5% for the next ten years, which is pacing faster than the average for other occupations. It is expected that other over 2,000 openings every year for the next decade.

Interview From The Field

Linh Mai is a professional geologist, specifically a geotechnical engineer. She holds a M.S. in Geotechnical Engineering, specializing in soil mechanics fromm the National Central University in Taiwan.

***Pathways:* What would you do to maximize your time in getting a head start in your field?**

Linh Mai: To maximize my time in

getting a head start in geology, I took advantage of every opportunity to learn and grow. This included taking classes, attending field camps and conferences, volunteering and interning, and networking with other geologists. Specifically, I took as many science and math classes as possible in high school. This gave me a strong foundation in the basics of geology, which made my college studies easier and more enjoyable.

I also started researching different colleges and universities that offered geology programs. I considered factors such as the program's curriculum, faculty, and location when making my decision.

Pathways: How can someone in primary school prepare for your field?
Linh Mai: There are many things that someone in primary school can do to prepare for a career in geology. Here are a few ideas:

- Encourage them to be curious about the world around them. Ask them questions about the rocks and minerals they see, and help them learn about the different geological processes that shape our planet.
- Take them on field trips to museums, parks, and other places where they can learn about geology.
- Buy them books and educational toys related to geology.
- Watch documentaries and TV shows about geology with them.
- Enroll them in summer camps or programs related to geology.

It is also important to expose children to different career paths in geology. Let them know that geologists can work in a variety of settings, including academia, industry, and government. Help them to understand the different types of research and work that geologist do. These some specific activities that student in primary school can do to learn more about geology:

- Collect rocks and minerals. This is a great way to learn about the different types of rocks and minerals that exist, and to see how they vary in appearance and composition.
- Build a rock collection. This is a fun and educational way to learn more about the different types of rocks and minerals, and to track down specific specimens.
- Make a rock or mineral model. This is a great way to learn about the structure and properties of rocks and minerals.
- Read books and articles about geology. There are many great resources available for children of all ages.
- Watch documentaries and TV shows about geology. This is a great way to learn about different geological processes and see geologists in action.
- Visit museums and parks with geological exhibits. This is a great way to see

rocks and minerals up close and learn more about their history and significance.

By encouraging children to be curious about the world around them and exposing them to different learning opportunities, you can help them to develop a strong foundation in geology that they can build on in the future.

***Pathways:* Are there any mistakes you can think of that a new person in your field/at your school can avoid?**

Linh Mai: Not taking advantage of opportunities to learn and grow. Geology is a vast and ever-changing field, so it is important to be constantly learning. Take advantage of opportunities to attend workshops, conferences, and field camps. Get involved in research projects and extracurricular activities. And don't be afraid to ask questions of your professors, mentors, and colleagues.

- Being afraid to make mistakes. Everyone makes mistakes, especially when they are new to something. Don't be afraid to try new things and experiment. The more mistakes you make, the more you will learn and grow.
- Not networking with other geologists. Networking is essential for building a career in geology.
- Not being prepared for fieldwork. Fieldwork is an essential part of geology, so it is important to be prepared for the challenges it can present.
- Not being able to work independently. Geologists often have to work independently, so it is important to be able to manage your time and workload effectively. Be proactive and don't wait for someone to tell you what to do.
- Not being able to communicate effectively. Geologists need to be able to communicate effectively with a variety of audiences, including scientists, policymakers, and the general public. Be able to clearly and concisely explain complex geological concepts.

***Pathways:* What do you see as the future of your field?**

Linh Mai: The increasing use of technology. Geologists are increasingly using technology to collect and analyze data, and to create models and simulations. This allows them to better understand and predict geological processes. A focus on sustainability. Geologists are playing a key role in developing sustainable solutions to the challenges we face, such as climate change and resource depletion. A globalized workforce. Geologists are increasingly working on global projects. This requires them to be able to communicate and collaborate with people from different cultures and backgrounds.

***Pathways:* Are there any trends in your field you don't see panning out?**

Linh Mai: The overreliance on artificial intelligence (AI). AI is a powerful tool that can be used to automate many tasks in geology. However, I don't believe that AI will ever be able to replace the need for human geologists. Geologists need to be able to think critically and make decisions in complex situations. AI cannot do this yet.

The focus on short-term profits. Some companies are focused on extracting resources as quickly and cheaply as possible, without regard to the long-term consequences. This is not a sustainable approach. Geologists need to be able to think about the long-term consequences of their work and make decisions that are in the best interests of society as a whole.

The lack of diversity in the field. Geology is male field. This is a problem because it means that we are not getting the full range of perspectives and ideas that we need to address the challenges we face. We need to make a concerted effort to attract and retain people from all backgrounds into the field of geology.

I believe that these trends are harmful to the field of geology and to society as a whole. We need to move towards a more sustainable, equitable, and inclusive approach to geology. The focus on short-term profits is leading to environmental damage. When companies focus on extracting resources as quickly and cheaply as possible, they often cut corners on environmental protection. This can lead to pollution, water contamination, and other environmental problems.

The lack of diversity in the field is leading to a loss of ideas and perspectives. When we only have one perspective on a problem, we are less likely to find the best solution. We need to make sure that we are getting the input of people from all backgrounds in order to solve the challenges we face.

***Pathways:* What is your average day as a geologist like?**

Linh Mai: An average day for a geologist varies depending on their specialization and work setting. Field geologists often start by planning and preparing for fieldwork, which can include researching the geological features of the area, gathering equipment, and ensuring safety measures. In the field, they engage in tasks such as geological surveys, rock mapping, and sample collection. Back in the office or lab, geologists analyze collected samples, interpret data using specialized software, and create reports or presentations to communicate findings. They also participate in meetings and collaborations with colleagues and clients, combining outdoor fieldwork with data analysis and teamwork to better understand Earth's geological processes.

***Pathways:* How long does it take to get established in your field?**

Linh Mai: It typically takes a few years to get established in the field of geology. After graduating from college with a degree in geology, most geologists start out in entry-level positions, such as field technician or laboratory assistant. As they gain experience and skills, they can advance to more senior positions, such as project geologist or consulting geologist.

The specific amount of time it takes to get established in the field of geology will vary depending on a number of factors, including:

The individual's education and experience. Geologists with a master's degree or PhD will typically have more opportunities than those with only a bachelor's degree. Geologists with experience in industry or government are also more likely to be hired for senior positions.

The job market. The job market for geologists can vary depending on the state of the economy and other factors. In general, the job market for geologists is expected to grow faster than average over the next decade.

Exploration geologist

The individual's location. Some regions have more job opportunities for geologists than others. For example, geologists are in high demand in areas with oil and gas reserves or mineral deposits.

Here are some tips for getting established in the field of geology:

- Get a good education. A degree in geology from a reputable university is essential for getting a job in the field.

- Gain experience. Internships and volunteer work are great ways to gain experience and learn about different aspects of geology.

- Network with other geologists. Attend professional meetings and conferences, and connect with geologists on social media.

***Pathways:* What opportunities do you see for individuals working in your field, or for your field of study at large, to better our society?**

Linh Mai: We, geologists, play a vital role in bettering our society in a number of ways. Here are some specific examples:

- Developing sustainable energy sources. We are working to develop renewable energy sources, such as geothermal energy and carbon capture and storage. These energy sources are essential for reducing our reliance on fossil fuels and mitigating climate change.

- Protecting the environment. We are working to protect the environment from pollution and other hazards. We are also working to develop more sustainable mining practices and to restore damaged ecosystems.

- Improving public safety. We are working to improve public safety by identifying and mitigating natural hazards, such as earthquakes, volcanic eruptions, and landslides. We are also working to develop early warning systems for these hazards.

- Educating the public about geology. We are educating the public about the importance of geology and the need to protect our planet. We are also teaching the public about natural hazards and how to stay safe.

***Pathways:* What is one piece of advice you would give to your younger self, while examining your future?**

Linh Mai: If I could give one piece of advice to my younger self, while examining my future, it would be to follow my passion for geology. Geology is a fascinating field with many opportunities to make a difference in the world. If I am passionate about geology, I will be more likely to succeed and have a fulfilling career. Here are some specific tips for following my passion in geology: I would identify my interests, get involved in extracurricular activities related to geology, and talk to my professors. Don't be afraid to take risks! If I see an opportunity that I am interested in, I need to go for it! Following my passion in geology has lead me to a rewarding and fulfilling career.

Data Analyst

What is a Data Analyst: A data analyst is someone who makes sense of the massive amount of data that many companies collect. Most companies collect data on their consumers in order to sell new products and market them more efficiently. However due to the sheer size of this raw data, they require trained analysts to interpret this data. Data analysts collect this data, organize it and then transform raw numbers into usable information for their clients.

Careers in Data Analysis: Data analysis is often used to refer to two main specialties which are similar but are quite different in their application: data analysts and data scientists. A data analyst focuses on answering specific questions already identified and asked for by the client. These findings will be shown in graphs and charts, allowing the information to be turned into profitable solutions and products. By contrast a data scientist researches which questions the business should be asking, relying on data modeling. There is a lot of prediction and algorithm writing in this role. Emily Stevens, a tech start up strategist, puts it this way:

> In short: data analysts tackle and solve discrete questions about data, often on request,revealing insights that can be acted upon by other stakeholders, while data scientists build systems to automate and optimize the overall functioning of the business.

Working in data analysis will require you to learn multiple programming languages, have experience in data querying languages, data mining and machine learning. Additionally you will need soft skills like strong verbal and written communication skills and an evaluative mind.

Data science workshop, University of Washington

Data Analysis

International Data Analysis Olympiad

Becoming a data analyst usually requires earning a bachelor's degree in computer science or a related field, especially a degree with a focus on statistics and analysis. Mathematics is a great alternative.

However there are ways to become a data analyst without getting a four year degree. Many institutions, such as Google, offer low cost or even free data boot camps teaching beginners the basics of how to code, program and use data query languages. Many universities also offer courses, like the University of California, Irvine's professional course from the Division of Continuing Education.

Salary: The figures on salaries for data analysts and data scientists tend to vary. The numbers from Salary.com show a range of $75,012 and $93,764 whereas the Bureau of Labor Statistics (BLS) shows for data scientists specifically, a median salary of over $103,000 in the last year.

Trends in Career Field: According to the BLS, data analysis and data science is expected to have huge growth in the next 10 years, which is significantly faster than nearly all occupations. On any given year on average, there are over 17,000 openings in data analysis.

Architect

Marlon Blackwell architect, Fayetteville, Arkansas, 2019

What is an Architect: An architect is someone who professionally designs buildings and landscapes. They focus on both technical and aesthetic aspects, and can work in a lot of different roles professionally. Being an architect can require a lot of creative vision and also technical knowledge. Architects can work on either private or government buildings and often work together with those in fields like city planning, engineering or interior design. Joshua Zinder – president-elect of the New Jersey chapter of the American Institute of Architects describes potential architects this way:

> If you're a young person and you walk into a room and you go, 'Wow, that's a great space,' and if you are a young person walking down the streets of a city and you have to pull out your camera because you see how buildings are aligning and how the banners on the buildings are aligning and how the sun is setting on the edge and you have to take that picture, well then architecture is something you should consider,

Careers in Architecture: Getting started as an architect takes three steps; getting a professional college degree in architecture, working in an internship and passing the Architect Registration Exam. Most architects get a specialized five year degree. Earning an additional master's degree in architecture can get a professional architect ahead in their field but can take an additional three to five years. Many architectural firms have an IDP or Intern Development Plans.

Lastly, many architects become certified through the National Council of Architectural Registration Boards or NCARB. This is a voluntary process but this allows architects to become certified in multiple states at once which is why over 33% of architects pursue this course.

There are many different types of architects ranging from residential architects who work on designing private homes to conservation architects who work on the protection and restoration of historic buildings.

Salary: Naturally the pay range will vary a lot depending on the nature of the architectural firm, but the median salary for architects was $82,000 in 2022, according to the Bureau of Labor Statistics.

Trends in Career Field: The architecture sector is projected to grow 5% in the next ten years, which is faster than the average for all jobs measured by the Bureau of Labor Statistics. There are roughly 8,200 openings for architects every year on average.

Architecture Students

Congressman Peter Roskam Honors College of DuPage Architecture

COD Architecture Students Design, Build and Install Pavilion

ABOUT US

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