

The top 20 Career in UAS in 2020:

01. Software developer

Software developers invent the technologies we sometimes take for granted. For instance, that app that rings, sings or buzzes you out of a deep sleep every morning? A software developer helped design that. And when you roll into the office and turn on your computer, clicking and scrolling through social media, music and your personal calendar – software developers had a big hand in shaping those, too. You might spend your lunch shopping, and before you make that big purchase, you check your bank account balance using your phone. Later, you're cooking a new recipe from that great app your friend told you about. As you look over the course of your day, you come to see that software developers are the masterminds behind the technologies you now can't imagine living without. The best software developers are creative and have the technical expertise to carry out innovative ideas. You might expect software developers to sit at their desks designing programs all day – and they do, but their job involves many more responsibilities. They could spend their days working on a client project from scratch and writing new code. But they could also be tasked with maintaining or improving the code for programs that are already up and running. Software developers also check for bugs in software. And although the job does involve extreme concentration and chunks of uninterrupted time, software developers have to collaborate with others, including fellow developers, managers or clients. Developers are often natural problem solvers who possess strong analytical skills and the ability to think outside the box. Software developers are employed in a range of industries, including computer systems design, manufacturing and finance. The Bureau of Labor Statistics projects 25.6 percent employment growth for software developers between 2018 and 2028. In that period, an estimated 241,500 jobs should open up.

02. Dentist

Dentists identify and treat problems concerning a patient's mouth, gums and teeth. Their duties include extracting teeth, fitting dentures and filling cavities. Some choose to specialize in areas that range from treating serious oral problems and diseases to straightening teeth and performing oral surgeries. They are assisted by dental hygienists, who complete a patient's teeth cleaning, and by dental assistants, who usually help with record keeping and instrument sterilization.

Many people dread the dentist. When they open wide, they're afraid what the dentist will find. Yet another cavity? Or even worse – will it be time for a root canal? Will the dentist embarrass them about their flossing frequency or their coffee drinking? Will they push procedures that patients don't want? According to Ada S. Cooper, a consumer adviser for the American Dental Association and dentist with a private practice in New York City, these concerns are why establishing trust is so important. "Patients have to know that dentists are doing what's best for them," Cooper says. And they can do this by being honest, ethical and compassionate – three qualities Cooper looks for when she is hiring at her practice. She also highlights the importance

of good communication skills. The Bureau of Labor Statistics projects 7.6 percent employment growth for dentists between 2018 and 2028. In that period, an estimated 10,400 jobs should open up.

3.Physician:

Physician assistants diagnose illnesses, develop and carry out treatment plans, assist in surgeries, perform procedures and guide patients. Their work is very similar to that of a general internist or doctor, but in most states, PAs must collaborate with a licensed physician or surgeon to practice. Jeffrey Katz, former president of the American Academy of Physician Assistants, says, "I diagnose and treat patients, illnesses and diseases and counsel them on their path to wellness."

Often, the physician or surgeon supervision is more like collaboration, but there are certain archaic regulations that make life for physician assistants – and their patients – difficult. "To give a real-life example of these arbitrary regulations, in my practice, I can write a patient a prescription for morphine," Katz explains. "However, by law, I cannot prescribe my diabetic patients diabetic shoes. Often, the stress comes in when PAs are not able to practice to the full extent of their training, education and ability." But the profession is filled with rewards that come from helping and treating patients. A 2015 AAPA study found that more than 96 percent would recommend their physician assistant career to others. Katz has worked in the same family practice in Taylorsville, North Carolina, for more than 20 years and has seen generations of families. "It is really cool to see the children of children. ... I don't think there's any better gift," he says. Physician assistants are expected to continue to be an important part of providing health care services, as they can be trained more quickly than physicians but can provide some of the same services. The Bureau of Labor Statistics projects 31.1 percent employment growth for physician assistants between 2018 and 2028. In that period, an estimated 37,000 jobs should open up.

4. Orthodontists:

Orthodontist are dental specialists who remedy problems with improper bites and askew teeth. They examine patients' mouths and jaws to design an orthodontic program for the two-fold purpose of helping patients achieve and maintain proper function jaws while also perfecting their smiles. What do Faith Hill, Emma Watson, Tom Cruise and even Prince Harry all have in common? Braces. Orthodontists are responsible for these devices and the beautiful pearly white smiles they create. Robert E. Varner, president of the American Association of Orthodontists, says that some of the most momentous events during the first few decades of life – in addition to getting a driver's license or getting married – include getting braces taken off. In his office, patients get their pictures taken before and after their orthodontics work. "When we look at the before and afters, it's so amazing," he says. "It's really one of the most wonderful parts of the job."

Orthodontists rely on the use of braces, retainers and other appliances to rectify bites and straighten teeth. They also get the opportunity to foster meaningful relationships with patients over the course of several years, which can be gratifying. "As a job, you can't beat it," Varner says. The Bureau of Labor Statistics projects 7.3 percent employment growth for orthodontists between 2018 and 2028. In that period, an estimated 500 jobs should open up.

5. Nurse practitioner:

Nurse practitioners are registered nurses with additional education. Extra schooling allows these professionals to take patient histories, perform physical exams, order labs, analyze lab results, prescribe medicines, authorize treatments and educate patients and families on continued care. Nurse practitioners, also known as advanced practice registered nurses, specialize by patient population, training to work in areas like women's health or pediatrics. They may also work in research or academia. Their job sounds similar to a physician's role, right? So, what's the difference? The main contrast is the amount of formal education required. Physicians have more training, and their breadth of knowledge and their salaries are usually commensurate with their additional work. However, increasingly – and somewhat controversially – nurse practitioners are providing primary care to patients. Many nurse practitioners first worked as registered nurses where their treatment of patients extended to holistic and wellness care, and a NP brings that background to his or her diagnosis, treatment and management of medical issues. Nurse practitioners are handsomely paid for their work, with the top 50% taking home six-figure salaries. The Bureau of Labor Statistics projects 28.2 percent employment growth for nurse practitioners between 2018 and 2028. In that period, an estimated 53,300 jobs should open up.

6. Statistician:

Statisticians practice the science of using data to make decisions. They decide what data they need and how to collect it, design experiments, collect data, analyze and interpret data, and report conclusions. And unlike most professions, statistics can be applied to a vast number of fields or issues, like the environment, public safety, health care and sports. As the famous mathematician and statistician John Tukey once told a colleague, "The best thing about being a statistician is that you get to play in everyone's backyard." Devan Mehrotra, executive director of the biostatistics department at Merck Research Laboratories, says, "I absolutely fell in love with statistics. Any real-world problem almost always is going to require some data to be analyzed and interpreted, generating value-added solutions by using statistics." Going forward, Mehrotra sees statisticians working closely with collaborators from the biomedical, computer, environmental, genetics and social sciences as well as contributing to quantitative solutions involving human rights and counterterrorism. "Statistics is one of oldest professions in the world; it dates back to the 1700s. There's a tremendous history ... and now more exciting opportunities. It has never been a better time to be a statistician," Mehrotra says. While some may confuse statisticians with the growing data scientist profession, the fields have some key differences. Statistics is just one component of data science. Data scientists should

have a basic working knowledge of statistics. However, data scientists tend to focus more on software programming and machine learning than statisticians do. Data scientists may serve as the lead software engineering coordinator at companies with smaller data science teams. Data scientists should possess the skills to log data, which is not necessarily expected of statisticians. The Bureau of Labor Statistics projects 30.7 percent employment growth for statisticians between 2018 and 2028. In that period, an estimated 13,600 jobs should open up.

7. Physicians:

They're the people we call when the contractions come every five minutes. We rush to them for broken arms, and we make appointments when we find irregular freckles. We come to them with coughs and colds and when we suspect that mom might be losing her memory or that dad's heart is working too hard. They're obstetricians and gynaecologists, ER doctors, dermatologists, primary care providers, neurologists and cardiologists. There are two main types of physicians: a Doctor of Medicine or a Doctor of Osteopathy. Both diagnose and treat patients for a range of medical issues, although a D.O. might also specialize in preventive medicine and holistic patient care. Within these categories, there are a host of specialties, from radiology to allergy and immunology, plastic surgery to urology, and pediatrics to geriatrics. Over the last couple decades, there have been huge advancements in the field of medicine that have improved patient care, says Robert M. Wah, former president of the American Medical Association who is a board-certified obstetrician and gynecologist specializing in reproductive endocrinology and infertility. But he also says that physicians today face challenges. "There are a lot of nonmedical people intruding into (a physician's) exam room," he says, citing legislators who make laws about what can be said and done and lawyers who threaten medical liability. The Bureau of Labor Statistics projects 3.7 percent employment growth for physicians between 2018 and 2028. In that period, an estimated 1,600 jobs should open up.

8. Speech-language pathologist:

Speech-language pathologists evaluate, diagnose and treat people with speech, language or swallowing difficulties. They work with many types of patients, including stroke victims who are relearning to speak, babies who have trouble swallowing, people who speak with a stutter and children with language delays. "Our field is so broad," says Karen George, a speech-language pathologist and owner of Chicago Speech Therapy. "We're trained to work with babies through adults – the entire life span." Sometimes called speech therapists, SLPs work in a variety of settings, such as rehabilitation centers and nursing homes. George started her career in a hospital before moving to her own private practice, while Theresa Rodgers, president of the American Speech-Language-Hearing Association, spent her career in a public school setting. "Communication is such an essential skill in life, but certainly in a school environment," Rodgers says. "It was so rewarding to be able to work on curriculum-based activities and see children become more successful in the classroom." Indeed, George says that helping someone communicate can boost their overall standard of living. "Communication is just such a key part of everyday life." The Bureau of Labor Statistics projects 27.3 percent employment growth for speech-language pathologists between 2018 and 2028. In that period, an estimated 41,900 jobs should open up.

9. Oral and maxillofacial surgeon:

Oral and maxillofacial surgeons perform surgeries on the face, mouth and jaw. These professionals are dentists with at least four years of additional surgery training, so they can do everything from treating facial traumas to fixing cleft lips. They can diagnose and treat patients with head, neck and oral cancer. They can even administer anesthesia and perform cosmetic surgeries, such as face-lifts. But even though their specialty is specific, the technology used to treat and operate on the face, mouth and jaw is constantly evolving. "You have to have a commitment to lifelong learning," says Louis Rafetto, president-elect of the American Association of Maxillofacial Surgeons, chairman of the oral and maxillofacial residency program at Christiana Care Health Systems and a private practitioner in Wilmington, Delaware. In general, Rafetto says, "the surgeries will stay the same, but the way we do them will change." The Bureau of Labor Statistics projects 7.4 percent employment growth for oral and maxillofacial surgeons between 2018 and 2028. In that period, an estimated 400 jobs should open up.

10. Veterinarian:

Veterinarians examine, diagnose and treat animals. They can also perform surgeries, care for wounds, vaccinate against diseases and prescribe medications. In worst-case scenarios, vets are also qualified to euthanize sick or dying animals. Some of the biggest changes Dr. Lorin D. Warnick, dean of the College of Veterinary Medicine at Cornell University, has seen over the course of his career are people's attitudes toward their pets. "Many more people view animals as family members," he says. And that means their expectation for the quality of care is much higher now as well. Technology in the field has also evolved, Warnick says. Vets are now using everything from advanced surgical technologies to fight cancer to MRIs to care for animals. Genomics are also being used to test for specific genetic traits. But a veterinarian's work doesn't stop with dogs and cats. Some vets specialize in caring for farm animals, and some even protect the safety of our food supply by inspecting livestock. Others promote public health by fighting animal-borne diseases and help foster healthier relationships between people and their animal companions. The Bureau of Labor Statistics projects 18.4 percent employment growth for veterinarians between 2018 and 2028. In that period, an estimated 15,600 jobs should open up.

11. Medical and health services manager:

Medical and health services managers are the planners, directors and coordinators who work behind the scenes to keep hospitals, nursing homes, group practices and other health care facilities running efficiently. In short, they are super-organized professionals. Medical and health services managers are usually extremely detail-oriented people with good analytical skills. Because much of their time is spent working with doctors, health insurance representatives and other administrators, they should also have good interpersonal and communication skills. Problem-solving is another part of the job. Technical skills are also a must because these professionals must keep up-to-date with software and electronic health records. A high demand for more medical and health services managers is driven by the large baby boomer population needing more health care in hospitals, group practices and nursing homes as they age. It's also driven by the uptick in group practices and the need for managers

and administrators to helm these facilities. The Bureau of Labor Statistics projects 17.6 percent employment growth for medical and health services managers between 2018 and 2028. In that period, an estimated 71,600 jobs should open up.

12. Computer and information systems manager:

Computer and information systems managers, or information technology managers, are the guides who help organizations navigate the always-changing labyrinth that is modern technology. These all-important employees deliver short- and long-term visions for the company's technology needs and goals. Even though most IT managers have the technical chops to execute the various jobs of the workers they supervise, they are more likely to be caught in a meeting room than a server room. Coordinating technology-related matters with top executives, planning upgrades of existing software or hardware and negotiating with vendors for the service of current products or the purchase of new ones are all common tasks IT managers encounter. IT managers also install and upgrade an organization's computer system and protect the office network from hackers and malware. When the job is done well, many employees won't even notice the work involved. If you haven't had an email interruption or server meltdown in the past few months, you probably have an IT manager to thank. While the highest-profile jobs are in computer systems design, almost all organizations need IT managers, especially financial and insurance companies, manufacturing firms and federal, state and local governments. The rapidly growing health care industry is also expected to greatly increase its IT use, resulting in newly created positions. The chief drivers of this growth will be organizations upgrading their information technology systems to newer, faster networks and striving to avoid cyberthreats. The Bureau of Labor Statistics projects 11.3 percent employment growth for it managers between 2018 and 2028. In that period, an estimated 46,800 jobs should open up.

13. Registered nurse:

Registered nurses are responsible for monitoring a patient's condition, performing medical procedures and administering medicine. They also chart a patient's progress. These professionals work with a range of patients, from those who are healthy (and are proactively trying to stay that way), to those who are pregnant and bringing new life, to those who are nearing the end of life and hoping for a peaceful death. "Nurses have a very holistic view of health and well-being, and I really appreciated that perspective," Erin Whitehouse, an RN and a Ph.D. student at Johns Hopkins School of Nursing, writes in an email. "[They] look at an entire person and their situation, not just what medical concern they have." It's a philosophy that Florence Nightingale, the pioneer of modern nursing who lived more than a century ago, practiced, and her legacy lives on in hospitals, clinics and schools. Nightingale's concern for patients stretched beyond administering medication to caring for the whole person – physically as well as emotionally, intellectually and spiritually. And she backed up her nursing philosophies with research. Today, nursing research is just one of the exciting changes in the field, says Kathy McCauley, associate dean of academic programs at the University of Pennsylvania's School of Nursing. Increasingly, evidence-based science is confirming the

contributions nurses make to patient care. Many nurses specialize and work with patients who have a certain health condition, like cancer or diabetes. They can also specialize by body part. For instance, there are dermatology nurses and cardiovascular nurses, among others. RNs can also specialize by people group (like newborn babies) or by environment (like a school or hospital emergency room). The Bureau of Labor Statistics projects 12.1 percent employment growth for registered nurses between 2018 and 2028. In that period, an estimated 371,500 jobs should open up.

14. Mathematician:

A mathematician can be anyone from your middle school algebra teacher to a computer programmer. Some mathematicians primarily conduct research to explore and develop theories, while others are applied mathematicians who use theories and techniques to solve everyday problems. Theory is a huge part of a mathematician's job. Mathematicians use formulas and models to support or refute theories. Data is also an important aspect in the field, as mathematicians analyze and interpret data for practical purposes, such as business, engineering or science decisions and problems. Common positions mathematicians fill include financial analysts, systems analysts, professors and elementary, middle and high school teachers. "Teaching is the traditional path, but it certainly should not define us as mathematicians," says Freda Porter, who previously taught math courses, including applied mathematics and calculus, at University of North Carolina at Pembroke and University of North Carolina at Chapel Hill. "I was pretty happy teaching. Very happy with just watching the lights go on with students." However, she says, "I knew I needed something extra for myself." Porter is now president and chief executive officer at Porter Scientific, an environmental consulting and professional services company in Pembroke, North Carolina. The profession's versatility also influences job growth. Individuals and companies continue to adapt to an age of innovative technology, increasingly operating business online and through social media, smartphones and other devices. Digitally stored data is growing, and companies will need mathematicians to analyze that data to improve processes, design and create products. During a time of uncertainty regarding cyber security, mathematicians will also be needed to help information security analysts develop data security systems. In short, though the field is small, it's growing quickly. The Bureau of Labor Statistics projects 26.0 percent employment growth for mathematicians between 2018 and 2028. In that period, an estimated 800 jobs should open up.

15. Physical Therapist:

Many doctors refer patients with physical issues from athletic injuries to neurological traumas to physical therapists. These professionals come to the rescue after a stress fracture sidelines a runner, when an awkward slide into home base benches a softball player or after a stroke keeps a person bedridden. First, physical therapists evaluate a patient and examine his or her medical records. Then, they plan and execute rehabilitative programs designed to improve the patient's mobility, increase his or her strength and relieve or at least lessen his or her pain. Treatment plans often include different exercises and stretches, as well as hands-on therapies and

machines that assist with improving muscle strength, range of motion and motor function. The job also includes educating the patient – or members of the patient's support system – on the recovery process. Physical therapists will also consult with other health care professionals, including physicians, occupational therapists and clinical social workers, to offer a patient the best, most holistic care possible. Eric Robertson, the director of Kaiser Permanente Northern California Graduate Physical Therapy Education, says he first learned about the profession at age 15, when he was involved in a motocross accident. He required physical therapy, and over the next 10 months of rehab, he got to know his therapist really well, and the field appealed to him. "Physical therapy is a real safe, happy approach," he says. "It offers a meaningful and positive alternative to pharmaceuticals or surgery." The Bureau of Labor Statistics projects 21.9 percent employment growth for physical therapists between 2018 and 2028. In that period, an estimated 54,200 jobs should open up.

16. Optometrist:

Optometrists meet with patients and perform different tests to determine common eyesight issues, such as near- or farsightedness, for which they can prescribe glasses or contacts. They can also test patients for eye diseases, such as glaucoma, for which they can prescribe medicines. Optometrists can also perform vision therapy for other issues, such as eye-movement or eye-tracking problems. Sometimes optometrists run across a problem like diabetic retinopathy, which is symptomatic of a systemic problem like diabetes. Eyesight is invaluable for everyday tasks like walking through a doorway or driving a car and also for pleasures like watching a sunset, reading a book or a viewing a film. If you were to take a poll on which of the five senses are most important to people, sight would probably be high on the list. That's why an optometrist's job is so important. "We want to help patients achieve their best vision on a day-to-day basis," says Teri Geist, communication chair of the American Optometric Association and a practicing optometrist. The Bureau of Labor Statistics projects 9.5 percent employment growth for optometrists between 2018 and 2028. In that period, an estimated 4,000 jobs should open up.

17. Anaesthesiologist:

Anaesthesiologists are the physicians responsible for administering general or regional anesthesia, which allows surgeons and other physicians to complete invasive procedures with little to no discomfort to the patient. Anesthesiologists also closely monitor a patient's vital signs and critical life functions before, during and after a surgery – making rapid decisions on limited data when required. To say that the profession is stressful is an understatement. More than 150 years ago, ether – the first anesthetic – was hailed the "greatest gift ever made to suffering humanity." Today the drugs are different, but any woman who has experienced the excruciating pain of contractions followed by the amazing relief of an epidural will tell you that anesthesia remains one of the greatest gifts to humanity. Anesthesia is often portrayed as going to sleep, but J.P. Abenstein, an associate professor of anesthesiology at the Mayo Medical School, explains that general anesthesia is more akin to a powerful drug-induced coma. Anaesthesiologists typically administer a combination of intravenous drugs and inhaled gasses to render a patient unconscious and pain-free. For operations on the head, chest or abdomen, anaesthesiologists also have to support a patient's breathing with a breathing tube.

So it's no wonder that Abenstein describes the job like this: "An anaesthesiologist keeps a patient alive during an invasive procedure that would otherwise kill them." Anaesthesiologists may also employ sedation, in which medication is administered intravenously to calm the patient. With regional anesthesia, as opposed to general, anaesthesiologists inject medications near a knot of nerves to prevent pain signals from traveling to the brain – in other words, numb a certain part of the body. Patients who are given regional anaesthesia are awake, although they may also be sedated intravenously, which helps them relax, feel drowsy or even sleep, depending on the level of sedation. Abenstein says the breadth of the profession has dramatically expanded in the last decade. Anesthesiologists still work in hospital operating rooms, but their expertise is also needed in other places, including invasive radiology, gastrointestinal endoscopy, electrophysiology and more. The Bureau of Labor Statistics projects 4.5 percent employment growth for anesthesiologists between 2018 and 2028. In that period, an estimated 1,500 jobs should open up.

18. Obstetricians and gynaecologist:

Obstetricians and gynaecologists bring new life into the world and care for the spectrum of women's reproductive health. Obstetrics is the surgical field that deals in childbirth, whereas gynecology is the field of medicine concerned with women's health, especially their reproductive health. One can be a gynecologist and not an obstetrician, though one cannot be an obstetrician without being a gynecologist. OB-GYNs see patients in physicians' offices for routine "well-woman" exams, which could include contraceptive management and HPV screening. Mark S. DeFrancesco, president of the American College of Obstetricians and Gynecologists, writes in an email, "You cannot imagine what it feels like to deliver a baby – to be the first person to hold another new life in your hands and help create a new family!" They also assist patients who come to them with issues like abnormal bleeding. "To be able to accurately diagnose and successfully treat these problems is extremely gratifying," DeFrancesco says. And of course, OB-GYNs also work in the labor and delivery section of hospitals, monitoring mothers and babies during labor and – when things don't go as planned – making medical decisions to protect the lives of both. Similar to other health care professions, obstetrics and gynecology is not without its stresses. According to DeFrancesco, OB-GYNs worry that they might have missed some problem or sign of illness, that an extremely rare tragedy will befall one of their labor and deliveries and that they might be sued for medical malpractice even if they made no mistakes. DeFrancesco says this field is especially vulnerable, since OB-GYN patients are predominantly young and presumably healthy. "When things go wrong, it is very unexpected," he says. Like other fields in medicine, DeFrancesco sees obstetrics and gynecology moving more toward preventing problems rather than just fixing them. "Studies show that the majority of women in childbearing years only see their OB-GYN on a regular basis and rarely seek out an otherwise designated primary care doctor," he explains. So, who better to address health concerns than the OB-GYNs who see these patients regularly? "We are poised to go beyond the Pap test and the pelvic exam and provide more comprehensive care for our patients," DeFrancesco says. "At least in terms of broader screening for other health conditions, as well as more directly addressing with our patients their weight and other lifestyle choices." The Bureau of Labor Statistics projects 2.3

percent employment growth for obstetricians and gynecologists between 2018 and 2028. In that period, an estimated 500 jobs should open up.

19. Surgeon:

Surgeons operate on patients who suffer from injuries, diseases or deformities. These professionals can train toward becoming general surgeons, or they can choose a specialization, such as orthopedic, neurological, cardiovascular or plastic surgery. "In the surgical specialty, there's stress around the corner all the time, and you have to be prepared for that," says Dr. Maria Siemionow, who in 2008 led a team of surgeons in a 22-hour procedure to replace the face of gunshot victim Connie Culp. This near-total face transplant was the first surgery of its kind in the U.S. Not only was Siemionow in charge of delegating responsibilities to a handful of surgeons, but she also was attempting a procedure that had previously been done on cadavers only. Siemionow says she was subconsciously thinking about the patient's family and the rescue plan, if the surgery were to take a bad turn. "We were working for an unknown outcome," she says. But after connecting the arteries and veins of the donor's face with Culp's own, the new face "pinked up" – a sign to the transplant team that the surgery was working. It was a ground breaking moment. Prospective surgeons should understand the gravity of the job they're undertaking, but a sense of humor might be an imperative trait, too. When asked what first drew her to microsurgery – a surgery specialty that requires the use of an operating microscope – Siemionow gives a twofold answer that shows both her seriousness and her sense of humor. First, it's a good place to learn a lot. If someone has mastered the art of sewing and suturing arteries and veins under magnification, then he or she is skilled enough to sew and suture larger arteries and veins that don't require microscopes. Second, it was the cool thing to do. "When I was finishing medical school, it was a popular field – it was generally the cool thing to do at the time," she says. "Today, people are talking about in vitro fertilization and stem cell therapies – that's the cool of now. [Back then,] if you were interested in surgery, you did microsurgery. " The Bureau of Labor Statistics projects 1.2 percent employment growth for surgeons between 2018 and 2028. In that period, an estimated 500 jobs should open up.

20. Operations research analyst:

Operations research analysts are high-level problem-solvers who use advanced techniques, such as optimization, data mining, statistical analysis and mathematical modeling, to develop solutions that help businesses and organizations operate more efficiently and cost-effectively. For example, UPS uses operations research to chart the flow of packages, provide real-time route guidance to drivers and help plan and manage distribution. In the health care field, the Memorial Sloan-Kettering Cancer Center in New York used operations research to design a radiation treatment plan for prostate patients using sophisticated modeling and computation techniques.

Anne Robinson, chief strategy officer for supply chain management software company Kinaxis and past president of the Institute for Operations Research and the Management Sciences, says, in a nutshell, operations research analysts provide the insights for businesses to make decisions

at the next level. "This is really decision guidance. Companies are trying to get value out of big data and analytics platforms investments, and they need the right talent to take it from raw data to an intelligent asset for business," says Robinson, whose focus includes developing models to ensure Verizon stores have enough inventory to meet demand. The Bureau of Labor Statistics projects 25.6 percent employment growth for operations research analysts between 2018 and 2028. In that period, an estimated 28,100 jobs should open up.