

Alexander C. English

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Education

University of Southern California (Viterbi School of Engineering)

Aerospace Engineering Master of Science Candidate

Los Angeles, CA

August 2024 – Present

University of California, Berkeley (College of Letters & Science)

Physics B.A., Mechanical Engineering minor; Distinction in General Scholarship (*cum laude*)

Berkeley, CA

August 2015 – May 2020

- **Physics Courses:** Analytic Mechanics, Circuits & Instrumentation Lab, Electricity & Magnetism, Experimentation Lab, Mathematical Physics, Quantum Mechanics, Special and General Relativity, Statistical Mechanics, Waves & Optics
- **Engineering Courses:** Solid Mechanics, Classical Dynamics, Fluid Dynamics, Thermodynamics, Feedback Control, UAV Design and Control, CAD Modeling
- **Math Courses:** Calculus (Single/Multivariable), Linear Algebra, Differential Equations

Experience

Northrop Grumman Tactical Space Systems Engineer

El Segundo, CA

April 2021 – June 2024

- Flight / Ground Safety and Launch Integration support for government and commercial missions: Habitation and Logistics Outpost (HALO), Commercial Resupply Services (CRS-2) Cygnus, Mission Robotic Vehicle/Mission Extension Pod (MRV/MEP)
- Experience authoring Range Safety Tailoring, Ground Operations Plans, Safety Data Packages, Hazard Analyses, interfacing with customers and launch vehicle providers

SpaceX Propulsion and Mission Integration Intern

Hawthorne, CA

May – August 2018

- Served as interface between customers and responsible engineers during NASA Crew and EELV qualification campaign for Falcon 9 Block 5 Merlin Engines
- Negotiated requirements with customers and coordinated additional testing and engineering rationale to verify all major engine components and valves on Stage 1 & 2
- Obtained 45th Space Wing approval for Range Safety requirements of STP-2 mission
- Provided mission and customer support to process satellites and integrate payloads throughout BulgariaSat-1 (SSL) and Intelsat 35e (Boeing) launch campaigns
- Conducted magnetic survey to ensure STP-2 mission adherence to ICD requirement

Cape Canaveral, FL

May – August 2017

Co-President and Founding Member of Goldeneye

Berkeley, CA

January 2017 – May 2018

- UC Berkeley independently formed student-run engineering club
- Pilot Project: Supersonic business jet design concept to meet NASA Aeronautics Design Challenge performance and environmental goals (see Honors)

CalTech Summer Undergraduate Research Fellowship (SURF)

Pasadena, CA

May – August 2016

- Research Fellow under Goldberger Professor of Planetary Science David Stevenson
- Designed hydrostatic equilibrium equations to predict Jupiter's core size and mass
- Constructed models of planet's interior for data collected by NASA's Mission Juno

Honors

2020	Distinction in General Scholarship (<i>cum laude</i>)	Berkeley, CA
2017	Honorable Mention, NASA Aeronautics University Design Challenge	Hampton, VA
2015	President of UC Berkeley NCBA Club Baseball Team	Berkeley, CA
2015	Valedictorian of South Pasadena High School (GPA: 4.0, unweighted)	South Pasadena, CA
2015	Rabi Scholarship (for students admitted to Columbia University)	New York, NY
2015	National Merit Scholar Finalist	South Pasadena, CA
2015	Second Place, SkillsUSA CA State Cabinetmaking Competition	San Diego, CA
2015	First Place, SkillsUSA Los Angeles Regional Cabinetmaking Competition	Los Angeles, CA

Skills

Foreign Languages: fluent French, conversational Italian

Metalworking & Woodworking: skilled in lathe, CNC operations

Programming Languages: proficient in Microsoft Office, MATLAB, AutoCAD, SolidWorks, C++, Java, LaTeX, Mathematica

Design/Image Editing: trained in SolidWorks, AutoCAD, Photoshop, Final Cut, PyRAF, DS9 (astronomy image reduction)

Competitive Yo-yo: attends meets and competitions; presented "Yo-yo-ing" TEDx Talk (South Pasadena, May 30th, 2015)