Curriculum Vitae

Megan Jones

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Education

University of Michigan GPA: 4.00 August 2024 - Present
School for Environment and Sustainability & Electrical and Computer Engineering
Pre-Candidate, PhD expected May 2029

University of California, Los Angeles GPA: 3.96 September 2019 - June 2023
Bachelors of Science Awarded June 16, 2023 in **Mechanical Engineering**
Summa Cum Laude
Bachelors of Science Awarded June 16, 2023 in **Physics**
Magna Cum Laude
10 Quarters Dean's Honors List

Santa Rosa Junior College GPA: 4.00 Summer 2017 - 2019

Santa Rosa High School GPA: 4.00 (Weighted: 4.73) 2015 - 2019

Work Experience

Lawrence Livermore National Laboratory April 2024 - August 2024
Cybersecurity Intern (CSI)
Zero Emission Vehicle Adoption Scenario Analysis and Charging Optimization

- Analyze specifications of current vehicle fleet at Joint Base Pearl Harbor-Hickam (JBPHH), Navy Region Hawaii, and determine feasible alternatives for heavy-duty zero-emission vehicles (ZEVs) with analogous capabilities
- Compile vehicle specifications for alternative ZEVs
- Conduct literature review on decentralized smart charging algorithms
- Assist with optimization algorithm development to determine economical and realizable charging schedules to analyze scenario costs, infrastructure and operational requirements, and overall feasibility

Santa Rosa Junior College August 2023 - December 2023
Mathematics PAL (Teaching Assistant)

- Provide in-class instructional assistance during personal and group work time
- Host review sessions before exams
- Hold office hours during which students ask questions about coursework, transferring to a four-year college, and life planning
- Grade homework and quizzes
- Generate support materials (YouTube videos, notes)

Lawrence Livermore National Laboratory June 2022 - December 2022
Science Undergraduate Laboratory Internships (SULI) Program
Weather Infrastructure Resilience (WIRE) Project Intern

- Research and quantify the relationship between weather variables and survival characteristics of infrastructure components

- Define climate adjustments to service life predictions for HVAC systems to improve condition projections and maintenance and repair timelines generated by the BUILDER program for the NNSA enterprise
- Lay groundwork for predicting the effects of climate change on infrastructure

Keysight Technologies June 2021 - September 2021

Mechanical Engineering Systems Intern

- Create, organize, and supplement documentation on machines and processes
- Design and fabricate fixtures and tooling for machines and processes
- Generate 3D models and 2D drawings of parts, tools, and process setups
- Research machines and materials for process improvement

UCLA Anatomics Lab February 2023 - December 2023

Figure Drawing Artist

- Design and draw figures for anatomics research papers that effectively communicate relevant technical information

Self Employed, COVID Tutors, Santa Rosa Junior College Fall 2015 - Present

*Mathematics, Physics, and English Tutor**

- Explain concepts to struggling students in easy-to-understand ways
- Provide assistance with coursework
- Develop an intuitive understanding of both material and how people learn

**Occasionally done as volunteering, rather than for-profit; based on context and student*

CALTeach January 2021 - March 2021

*6th Grade Mathematics Teaching Assistant**

- Develop and execute lesson plans
- Teach 6th grade students mathematical concepts, including decimals, long division, fractions, exponents, order of operations, equations, etc.

**Done as part of course offered at UCLA, experience-based, no payment*

Santa Rosa City Recreation & Parks, Ridgway Swim Center

Head Lifeguard June 2019 - September 2020

- Organize and monitor lifeguards on deck
- Treat injury and illness
- Cultivate a friendly and informative relationship with the public

Lifeguard June 2017 - September 2020

- Ensure patron safety through active surveillance
- Treat injury and illness
- Present a reliable face of the City of Santa Rosa

Swim Instructor June 2017 - September 2020

- Teach patrons of all ages water safety and survival skills
- Teach patrons of all ages technical swimming skills
- Adapt curriculum based on skill level

Volunteer Swim Aid Summer 2015, Summer 2016

- Assist swim instructors during lessons

Access Ingenuity December 2017 - January 2018

Part-Time Employee

- Write and edit alternate text, accessible transcripts, and other accessible documents

Publications

SULI Technical Report - WIRE

Jones, M. "Weather Infrastructure Resilience Project (WIRE), Phase 1: Developing scaffolding for analyzing climate impacts on infrastructure lifetimes via case study." U.S. Department of Energy, Office of Scientific and Technical Information. September 1, 2022. URL: https://www.osti.gov/servlets/purl/1885652

Projects

UCLA Design Build Fly Fall 2019 - June 2023

Project Manager Spring 2021 - Spring 2022

- Perform administrative communicative, financial, and organizational duties
- Lead the team in general meetings, conceptual design, and manufacturing
- Perform technical tasks as required for function of subteams
- Co-write 60-page technical report summarizing aircraft design and manufacturing
- Foster team building and recruit new members
- Develop and implement New Member Training program

Research & Development Co-Lead Spring 2022 - Spring 2023

- Wind tunnel, materials, and manufacturing process testing
- Design, CAD, and manufacture a flying wing RC aircraft

Vice Project Manager Spring 2020 - Spring 2021

- Assist with duties outlined under *Project Manager* above

General Member (CAD, Manufacturing, and Structures Teams) Fall 2019 - Spring 2020

- Design, CAD, and manufacture wing, hatch, sensor, tail, and nosecone for RC aircraft
- Applying manufacturing techniques involving wood, Monokote, and carbon fiber

Mechanical Engineering Capstone January 2023 - June 2023

Reversible Vasectomy Device

Design Lead

- Identify and research a mechanical design problem in medicine
- Work with clinicians to ensure the generation of practically applicable solutions
- Design, CAD, simulate, and prototype of a reversible vasectomy device
- Present research and design work to experts

Solar & Battery Smart Grid for Suburban Home Summer 2023 - Present

Worked with Chris and Trevor Jones to:

- Develop system design for grid-connected solar and battery storage smart grid system for a suburban home as an expansion on a solar-supplemented system

- Design and manufacture portable 12V battery module capable of running a refrigerator or home server as Prototype 1 for battery storage system module

UCLA Course E96P: Introduction to Engineering Design: Planes Spring 2021

Founder

- Generate structure, coursework, and teaching materials for an introduction to design course for designing and constructing foam RC planes
- Coordinate student instructors, space use, materials, and DBF-E96P integration

SAGE - Sustainable AGE Fall 2020 - June 2023

Co-Founder

Worked with Marcus Belingheri, Madeline Jennings, and Alex Messick to:

- Craft mission statement and develop three-pronged framework for SAGE
- Recruit, interview, and select members who demonstrated genuine interest in and capability to contribute to our mission
- Complete necessary administrative tasks to officially found a club at UCLA

Vice President of Lifestyle

- Educate students on how to incorporate sustainability into their daily lives
- Educate students on the topography of sustainability in the modern world
- Educate the community on climate change and sustainability legislation
- Research and put together presentations for corporate sustainability consulting with Varian Medical Systems and Live Outer
- Assist President with recruitment and administrative and organizational duties
- Assist President with organizing and running weekly club meetings
- Organize and host social events

Skills

- Computer Aided Design (CAD) and Finite Element Analysis (FEA)
- Understanding and application of manufacturing techniques involving wood, carbon fiber, aluminum, 3D printing
- Customer Service, Organization, and Leadership
- **Tools and Machinery:** Manual Mill, Manual Lathe, Chop Saw, CNC, Acetylene Welding, Drill Press, Laser Cutter, 3D Printer, Hot Wire Cutter, Monokote Iron & Heat Gun, Vacuum Pump, Dremel, Drill, Bandsaw, Grinder, Hand Tools
- **Computer Languages:** Preliminary C++, MatLab, Python, Mathematica, Arduino
- **Software:** MatLab, SolidWorks, SolidCAM, Creo, Siemens NX, Mathematica, Microsoft Office, Google Applications

Awards & Academic Honors

NSF GRFP Honorable Mention	2025
UCLA Mechanical Engineering Summa Cum Laude	Spring 2023
UCLA Physics Magna Cum Laude	Spring 2023
UCLA Dean’s Honor Roll	10 Quarters
James Fleck Scholarship	Spring 2019

Santa Rosa High School Varsity Swimming Most Valuable Player	2018, 2019
North Coast Section, CIF Scholar Athlete	2015-2019
Outstanding Student AP Language	2017-2018
Outstanding Student AP Calculus	2017-2018
Santa Rosa High School Student of the Month	May 2018

Extracurricular Activities

UCLA Swim Club (Member/Fundraising Chair/Media Chair)	Fall 2019 - Spring 2023
UCLA Club Wushu	Spring 2022 - Spring 2023
SRJC Orchestra	January 2021 - May 2021
Santa Rosa High School Math Club (Member/Secretary/VP/President)	2015 - 2019
Santa Rosa Symphony Youth Ensembles / Santa Rosa High School Orchestra	2009 - 2019
Neptune Swimming	2007 - 2019
Santa Rosa High School Varsity Swimming (Member/Captain/MVP)	2015 - 2019
Santa Rosa Dance Theater	2005 - 2013