Joseph Weil

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Professional Summary

Passionate and analytical recent mathematics undergraduate with an interest in applying theoretical knowledge and rigorous coursework in math and physics to develop industry-ready competencies in mechanical engineering. Experienced in applying numerical methods to scientific fields, with the ultimate goal of leveraging problem-solving skills to contribute to interdisciplinary work in mechanical engineering with renewable energy systems.

Education

University of California, San Diego Oct 2020 – Mar 2024

- BS in Mathematics – Applied Science
- Minor in German Studies
- GPA: 3.615

Relevant Experience

Mathematics LLM Trainer, Outlier – Oakland, CA (Remote) Apr 2024 – Present

- Assess AI-generated solutions to advanced undergraduate-level mathematical problems from subjects such as calculus and linear algebra
- Meticulously edit and rewrite solutions in LaTeX, ensuring mathematical accuracy and conformity to proper notation

Quantum ML Intern – Florence Quantum Labs Startup, San Francisco, CA (Remote) Sep 2024 – Oct 2024

- Gained foundational knowledge in quantum computing concepts, including qubits, quantum gates, and quantum algorithms, as well as machine learning concepts
- Engaged in fundamental quantum computational programming in the Quiskit framework with the goal of applications to climate forecasting

Teaching Experience

Mathematics Tutor – Private, San Diego, CA June 2023 – June 2024

- Prepared and executed detailed and effective learning curricula for several collegiate and pre-collegiate students in differential calculus and college preparatory math

Relevant Coursework

Mathematics: Differential, Integral, Multivariate, and Vector Calculus for Engineering, Differential Equations, Real Analysis, Statistical Methods, and Numerical Analysis: Linear algebra, Approximations, and Nonlinear Equations

Physics: Mechanics, Electricity and Magnetism, Optics, Thermodynamics, Fluids, Waves, Relativity and Quantum, Stellar Astrophysics and Black Holes, Atmospheric Dynamics, Ocean Waves

Skills and Languages

- **Technology:** Python, MATLAB, R, Java, Autodesk Fusion, LaTeX, SQL
- **German Language:** Intermediate oral and fluent reading/writing
- **Additional:** Problem-solving, Leadership, Communication and Customer Service

Interests

Independently advancing Python skills and developing personal data science projects utilizing web scraping. Further learning fundamental mechanical engineering subjects such as statics and thermodynamics independently for future study in the field.

Additional

Certification: Scientific Computing in Python – FreeCodeCamp Oct 2024 – Nov 2024

Extracurricular: UCSD Collegiate Sailing Team Sept 2021 – Mar 2024