Jonathan Elsner

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Seattle, WA | JEElsner
https://jeelsner.github.io/

Skills

Python | SQL | pytorch | scikit-learn | NumPy | pandas | Excel | git | Docker | CodeOcean | Optimization

Professional Experience

Workshop Specialist, *Allen Institute* Jun 2024 – Sep 2024 | Seattle
- Revised code and technical writing explaining computational neuroscience
- Developed Docker containers for cloud workstations in CodeOcean
- Taught coding and computational techniques for analysis of large datasets

Teacher, *C2 Education* Dec 2023 – Jun 2024 | Issaquah
- Taught SAT, ACT, and AP material
- Raised the GPAs of dozens of students
- Logged student progress in Excel spreadsheets

Math Tutor, *University of Washington* Oct 2021 – Jun 2023 | Seattle
- Tutored students in first-year calculus
- Taught dozens of students in one-on-one sessions daily
- Answered specific questions about students' homework problems
- Developed relationships with students to better understand their learning needs

Education

Applied and Computational Mathematics (MS), Sep 2024 – Jun 2025 | Seattle
University of Washington
Coursework in scientific computing, Data Analysis, Optimization, PDEs, and Dynamical Systems.

Budapest Semesters in Math Education Jun 2023 – Aug 2023 | Budapest, Hungary
Discovered Hungarian pedagogical methods for communicating math.

Mathematics (BS), *University of Washington* Sep 2019 – Jun 2023 | Seattle
Coursework in Optimization, Linear Algebra, Graph Theory, Probability, Numerical Analysis, Real Analysis, Proof Writing, Physics, Data structures and algorithms, Databases, AI, and Machine Learning.

Projects

COVID-19 Vaccine Management
- Modeled management of vaccine appointments, providers, and doses
- Coded a Python front end for a SQL database hosted on Azure
- Added business logic to intelligently pair providers and doses with vaccination appointments

OpenCourseWare Predictor
- Trained Decision Trees and logistic regression classifiers
- Predicted which students were likely to receive certification from studies
- Performed LASSO regression for feature selection
- Encoded textual data, normalized all input features, and established a pipeline to train models
- Gained insight into the original data to decide which model performed best
- Achieved ~99% classification accuracy while compensating for overfit

Spacetime Diagram
- Coded a GUI in JAVA for users to interactively graph objects traveling at relativistic velocities and understand their interactions
- Helped students gain a greater understanding of near-lightspeed travel and its effects