CAMILLE ZAUG

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EDUCATION

B.S. Mathematics, B.A. Physics

Seattle University

Fall 2016- Spring 2020 | Seattle, WA

• Chinese minor • 4.0 GPA • Alpha Sigma Nu • Sigma Pi Sigma

Ph.D Applied Mathematics

University of Washington

Fall 2020 - Present | Seattle, WA

• Planned focus: Data science

RELEVANT WORK EXPERIENCE

Software Engineering and Development Intern

Creative Creek

2020-Present | Camano Island, WA

- Developed algorithms in Python (translated to C++) to support the development of accounting and home financial software
- Parsed DTDs file descriptions for OFX and QFX financial data documents and converted to XML-compatible format
- Queried application database using SQL to import new data, analyze existing data, and generate financial reports for user

Computer Science Summer Immersion Program Instructor

Girls Who Code

2020-Present | San Francisco, CA

- Taught HTML, CSS, and Javascript through project-based learning to approximately 180 high school girls over 6 sessions to inspire a love of coding and spark a lasting interest in computer science
- Managed a team of 3-4 teaching assistants to produce adaptive virtual curriculum, including individualized debugging sessions with students and interactive web development demonstrations

Mathematics Research Assistant

Seattle University

2018-2020 | Seattle, WA

- Programmed numerical methods in Python to simulate deep water waves using 5+ nonlinear partial differential equations
- Leveraged Azure cloud computing to perform 50+ hours of simulation modeling wave evolution across 5000+ miles on the Pacific
- Analyzed resulting data sets using statistical methods
- Communicated results via posters and 15 to 30-min talks at 4+ professional scientific conferences and 4+ undergraduate conferences

PROGRAMMING LANGUAGES

Python (proficient)
- 4+ years: Scientific computing and algorithm development

MATLAB (experienced)
- 4+ years: Experimental data collection and analysis

R (prior experience)
- 1 year: Data analysis and statistical modeling

AWARDS

President's Award, 2020
Given to a graduating senior who entered Seattle University as a first-time freshman and maintained the highest Seattle University grade point average throughout the undergraduate degree

John Ju Award, 2020
Award granted by the College of Science and Engineering to one graduating Seattle University student in science or mathematics

Mirbagheri-Yandl Award, 2020
Achievement award in mathematics given to two graduating math majors

Best Poster Award, 2019
Society of Industrial and Applied Mathematicians Pacific Northwest Sectional Meeting, October

Bannan Scholar, 2018-2020
Two-year scholarship and service program for STEM students with a GPA of 3.5 or higher and a demonstrated commitment to service

SELECT COURSEWORK

- Phys 3910: Statistical Modeling
  Used machine learning (e.g., linear and logistic regression) in R to predict outcomes on multiple Kaggle datasets
- Math 3450: Numerical Methods
  Studied QR decomposition, SVD, linear regression, time complexity, etc. in this project-based, Python-heavy course
- Math 2320: Linear Algebra
  Studied optimization problems, eigenvalue problems, etc. by hand and through multiple MATLAB projects
- Phys 2060/3700: Modern & Advanced Physics Laboratories
  Wrote MATLAB scripts to interface with experimental physics equipment resulting in 8+ technical reports

PUBLICATIONS

- C. R. Zaug and J. D. Carter, "Dissipative models of swell propagation across the Pacific," *Submitted to Journal of Geophysical Research*, 2020.
- N. Pelle, L. Ehinger, C. R. Zaug, and W. J. Kim, "An autocollimator with sub-microradian sensitivity," *American Journal of Physics*, 2020.