CAMILLE ZAUG

camille.zaug [at] gmail.com | Seattle, WA | www.camillezaug.com | linkedin.com/in/CRZaug | github.com/CRZaug

EDUCATION

M.S. Applied Mathematics
University of Washington — Fall 2020 - Spring 2021

GPA: 3.93 | SIAM Club Member

Select Coursework:

- AMATH 584: Applied Linear Algebra and Intro to Numerical Analysis
- AMATH 563: Introduction to Deep Learning: Applications/Theory
- AMATH 583: High-Performance Scientific Computing

B.S. Mathematics, B.A. Physics, Chinese Minor
Seattle University — Fall 2016 - Spring 2020

Summa cum laude | GPA: 4.0 | Alpha Sigma Nu | Sigma Pi Sigma

RELEVANT WORK EXPERIENCE

Computer Science Instructor
Girls Who Code — Summer 2020, 2021

- Took action to close the STEM gender gap by welcoming over 360 high school girls into the computer science community, introducing them to the world of web development (JavaScript, CSS, HTML)
- Led a team of 2-4 teaching assistants to create an inclusive virtual class culture in order to support active student learning of computer science concepts through risk-taking, exploration, and partnership
- Emphasized how computer science can be a tool for positive change by mentoring students working on their capstone project: websites built to educate the public about causes meaningful to students

Software Engineering and Development Intern
Creative Creek — Summer 2020

- Worked closely with mentor to create a more engaging and intuitive accounting application than existing products that implements machine learning to provide more relevant financial insights to users
- Built foundations of the application by designing intelligent import tools and report generators that allow users to effortlessly connect their bank statements and easily understand their financial habits
- Developed in Python, C++, and SQL, making decisions to utilize existing libraries as much as possible and participating in database design by revising the schema to incorporate more relevant fields

Mathematics Research Assistant
Seattle University — 2018-2020

- Modeled ocean swell, applying nonlinear surface wave models previously only studied in controlled wave tanks to the chaos of the Pacific Ocean to determine their efficacy in a real-world environment
- Designed pipeline to process wave data in Python, spearheaded the use of Azure cloud computing to efficiently perform numerical simulations, and developed metrics to quantify model error
- Received multiple travel awards to present findings at professional conferences, received a best poster award at a SIAM sectional meeting, gave an invited talk at the University of Washington, and first-authored paper for *Studies in Applied Mathematics*

SELECT PROJECTS

Swell Prediction with Deep Learning
Predicted local ocean swell events using RNNs and a Seq2Seq model in Pytorch (inspired by surfing in Santa Cruz)

Portfolio Website
Designed, created, and deployed a personal interactive resume using Vue.js, HTML, CSS, and JavaScript (motivated by my work with Girls Who Code)

Timbre Synthesizer
Built a program and GUI in Python to allow users to create and experiment with musical tones (inspired by my favorite algorithm, the Fast Fourier Transform)

LANGUAGES

Programming Languages

Proficient

Python | C++ | MATLAB

Experienced

C | SQL | JavaScript | HTML | CSS | R | Julia | CUDA

Spoken Languages

Mandarin Chinese | Spanish

AWARDS

President's Award, 2020
Elected by department chairs and university president to receive highest academic award at Seattle University (given to one graduating senior)

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

Bannan Scholar, 2018-2020
Scholarship awarded for my academic achievement in conjunction with my community service in STEM education at Bailey Gatzert Elementary School

PUBLICATIONS

C. R. Zaug and J. D. Carter, "Dissipative models of swell propagation across the Pacific," *Studies in Applied Mathematics* (Accepted), 2021.

N. Pelle, L. Ehinger, C. R. Zaug, and W. J. Kim, "An autocollimator with sub-microradian sensitivity," *American Journal of Physics*, 2020.