Caleb Geiger

: caleblgeiger@gmail.com

: https://calebgeiger.org/

: Hinesville, GA (Open to relocation)

• https://github.com/ElodinLaarz
in: https://www.linkedin.com/in/caleb-geiger/

Citizenship: USA

TECHNICAL SKILLS

• Fluent in: Python, Git

• **Prior projects using:** C++, Javascript, HTML, CSS, C#, Sage

SELECT PERSONAL PROJECTS

- **WordlBattl**: Inspired by the popularity of the Wordle game, I created a version where you can play against an AI opponent. I also created an accompanying *WordlHelpr* that you can use to get ideas for words to try out if you are stuck in your Wordle game. See https://elodinlaarz.github.io/wordlBattl.html, and play for yourself!
- HanabiAI: A project that used genetic learning algorithms to teach an AI to play the card game Hanabi. As a consequence, it also included a text-based implementation of the game of Hanabi to play with the AI. See https://github.com/ElodinLaarz/HanabiAI.
- **Crypto**: A simple project where I implement Diffie-Hellman Key Exchange in the case of elliptic curves and then attempt to break the encryption using Pollard's Rho algorithm. See https://github.com/ElodinLaarz/CryptoPractice.
- **APLUnity**: A simple, single, two-dimensional level coded in C# using Unity. See https://github.com/ElodinLaarz/APLUnity/

EXPERIENCE

• University of Washington

Seattle, WA

Researcher in Computational Number Theory

Sep. 2015 — Jun. 2020

- **Overview**: Thesis research centered around the ideal class group of imaginary quadratic orders by counting the number of ideals of prime powered norm in the case of non-maximal orders.
- o Technical skills used: Heavily used Sage and Python when working with these non-maximal orders.
- Link to thesis: https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/45518/Geiger_washington_02500_21118.pdf

• Coding Enthusiast

Online

Participant

2019-Present

• **Overview**: Google Code Jam (2019 - 2021), qualifying in 2020 and 2021; Google Hash Code (2020 and 2021), placing 1,908th out of 10,724 participants and 2,615th out of 9004 participants, respectively, and I have already signed up for Google Hash code 2022, as well; and finally, foobar.withgoogle (Level 5).

• Mathematics Instructor

Savannah Technical College

Instructor

August 2021-Present

• **Overview**: Instruct and facilitate technical outcomes in the curriculum and proactively support all facets of the learning environment.

• Graduate Student Instructor

University of Washington

Mathematics Instructor

2015-2020

• **Overview**: Taught mathematics courses from Precalculus to Differential Equations and Linear Algebra. Awarded *Distinguished Teaching Award* from the mathematics department.

EDUCATION

• University of Washington, Seattle

Seattle, WA

M.S. in Mathematics, specializing in Algebraic Number Theory

Sep. 2015 — Jun. 2020

• University of California, Irvine

Irvine, CA

B.S. in Mathematics

Sep. 2013 — Jun. 2015