

Caleb Geiger

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🌐: <https://calebgeiger.org/>

📖: Hinesville, GA (Open to relocation)

🔗: <https://github.com/ElodinLaarz>

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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 *WordlHelp*r 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 prime powered norm in the case of non-maximal orders.
 - **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_0250O_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 (currently Level 4 out of 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