

Elijah Widener Ferreira

elijahwidener@vt.edu | Great Falls, VA | 571-373-1485 | www.linkedin.com/in/elijah-WidFer | <https://github.com/elijahwidener>

EDUCATION

Virginia Polytechnic Institute and State University

August 2021 – May 2025

Bachelor of Science in Computer Science and Mathematics

Relevant Coursework: Linear Algebra, Advanced Python, Software Design Lab, Theoretical Statistics

Eagle Scout

June 2018

SKILLS

Languages: C/C++ (Most Proficient) • Python • Java • Rust • Dart

Technologies: Git/GitHub • CMake • REST APIs • Flutter • NumPy

PROFESSIONAL EXPERIENCE

Virginia Tech; Undergraduate Research Assistant

September 2023 - December 2023

Impact of Noise on Quantum Algorithms

- Funding Source: Senior Military College Cyber-Institute
- Evaluate different NISQ architectures in C++ using CUDA Quantum by Nvidia
 - Benchmark performances for over 100 simulations for many different quantum algorithms.
- Develop strategies to assess how noise impacts these algorithms using cuQuantum.

Thomas J Henry PLLC; Paralegal

June 2022 – December 2022

- Collaborated closely with an attorney to advance cases to settlement.
- Served as primary liaison between clients, attorney, and medical practices, tasks including:
 - Client liaison, reducing medical balances, maintaining client data, and creating legal documents.
- Consistently surpassed monthly targets, with less than 5% of cases being under standard metrics.
- Achieved \$3.5M in settlements over time employed, earning top performer status in a firm of over 650 employees.

PERSONAL PROJECTS

MoonPoker Web App

September 2023 – Current

- Working in a team of four, developing a comprehensive web application for poker.
- Object-oriented design for 20+ poker variants with game logic to support unique betting styles, hand evaluation algorithms for different games.
- Developing a clean and intuitive user interface that seamlessly handles player accounts, game setup, and management for up to 9 concurrent players.
- Utilizing Flutter for front-end, and C++ along with CMake for back-end game logic, Integration between the front-end and back-end components is facilitated through a custom Python parsing algorithm for Clang and a proprietary API,
- Practicing strong coding fundamentals by writing documentation for all code using doxygen; testing all source code with Google Test; and practicing strong GitHub fundamentals to keep code safe.
- [Link to project](#)

StemMagnet

February 2024

- Developed and designed the front-end interface of StemMagnet, a hackathon project that works like tinder but for mentors and mentees.
- Used React along with CSS to write front end features such as a profile carousel for mentors, and a clean, intuitive sign up process sending information in real time to our database (MongoDB).
- Integrated back-end functionalities with Node.js and managed data storage and retrieval processes using MongoDB, contributing to the project's overall goals to match users.
- [Link to project](#)

Data Analysis for Stock Market and Pluribus Play Patterns

December 2023

- Python-based web scraping program to extract real-time stock market data and compare it to mentions of that ticker on Yahoo news.
- Using Python, analyzed 10,000 hands played by the poker AI, Pluribus, to look for tendencies when pots got big, as well as graph the tendency to win as pots got larger and larger.
- Utilized pandas and NumPy for efficient data manipulation and analysis.
- Ensured robustness with automated data cleaning and preprocessing.