Edward (Eddie) Hatfield

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EDUCATION

Tufts University, School of Engineering – Medford, MA, Expected May 2023

- B.S. in Computer Science
- Cumulative GPA: 3.63
- Coursework: Set Theory, Numerical Linear Algebra, Data Structures, Algorithms, Discrete Math, Computer Architecture and Assembly, Software Engineering, Convex Optimization, Computation Theory

Sinclair Community College – Summer 2019

- Calculus III

WORK EXPERIENCE

Stellar Science: Scientific Software Developer Intern – Albuquerque, NM, June 2021 – August 2021

- **Tracked down and solved bugs** in a **massive C++20/Qt codebase** in preparation for the release of our aerospace desktop application.
- **Utilized Visual Studio, CMake, and git** in a large-scale environment alongside many experienced engineers

Discover Technologies: Summer Intern – Remote, April 2020 – August 2020

- Assumed the role of a **lone developer** on a small team tasked with bringing our flagship application to mobile using the ServiceNow Now platform, involving **managing a relational database structure and centralizing business logic** to run the same code on both mobile and browser
- **Provided support in sales meetings as a developer** to display our progress to clients; met daily with both sales and requirements engineers to iron out objectives **in a time-sensitive, low-certainty environment**
- Surpassed goal of creating an app purely for demo purposes and instead **fully realized our team's vision well before the deadline with minimal supervision**
- **Wrote company blog posts** detailing what it takes to create a mobile app on the Now platform, along **with tricks and documentation for future maintainers** of the mobile app

Discover Technologies: Summer Intern – Remote, June 2019 – August 2019

- Created widgets that **added functionality** to our client's application, such as a widget that tracks page navigation and a widget that displays other widgets inside a pop-up panel
- **Presented weekly** on progress to the Requirements, Quality Assurance, and Sales teams and **participated in daily scrum meetings**
- Tracked the app's current behavior to update how well the roles and permissions were matching our requirements, then used this data to **create a quick solution in time for our app's release**

SKILLS

- Programming Languages: C++20, JavaScript, Python, Haskell, Java, C
- Frameworks: Qt, OpenGL, GLSL, Django REST Framework
- Software: git, vim, PostgreSQL, Visual Studio, Unix/Linux terminal, tracy profiling tools
- Math Packages: MATLAB, TensorFlow, NumPy

PROJECTS

EFGL (View on GitHub)

- Self-guided creation of a **real-time rendering engine** written with C++ and OpenGL that **leverages compute shaders** to employ a **forward-clustered shading pipeline**

Plume (View on GitHub)

- Self-guided creation of a **compiler written in Haskell** for my own strongly, statically typed **custom programming language** that **targets x86-64 assembly**
- **Linear scan register allocation** is performed on the intermediate bytecode to maximize performance

Image compressor/decompressor – Computer Architecture and Assembly class project

- C program with a **unit-testable design** and **bit-packing** of data, achieving a 2% loss with a 4x compression rate

ACTIVITIES

JumboCode (Student Consulting Organization) –Developer (Fall 2020-Present)

- Writing the **backend of a web-app** in a small team **using Django**, including **creating a specification** for our **REST API** endpoints and integrating those endpoints with **third party APIs such as Google Maps and Cloudinary**