

# Jonatan Fontanez

(305) 492-2565 | [jonatan.fontanez01@gmail.com](mailto:jonatan.fontanez01@gmail.com) | <https://jonatanfontanez.com/>

## SKILLS

**Java** (Proficient/Expert), **TypeScript/JavaScript** (Proficient/Expert), **Python** (Proficient/Expert), **Git/GitHub** (Proficient), **HTML/CSS** (Proficient), **Microsoft Office** (Proficient), **C#** (Proficient/Intermediate), **AWS** (Intermediate), **RISC-V** (Intermediate), **Assembly** (Beginner), **C++** (Intermediate/Beginner), **x86-64 Assembly** (Beginner), **Haskell** (Beginner), **C** (Beginner)

## EXPERIENCE

### **Abacus.AI** - Software Developer

JANUARY 2025 - AUGUST 2025

- Contributed to the development of CodeLLM, an AI-focused fork of VisualStudio Code
- Overhauled UI and UX using Tailwind, providing a smoother and more intuitive experience while modularizing components for easy debugging and feature development
- Helped to implement multiple user-facing features, including a built-in AI Agent to perform code suggestions and changes
- Handled user feedback and worked w/ QA engineers to resolve bugs and implement new features
- Personally implemented a dynamic file picker, a custom settings page, revamped client-side image uploading, and developed a workspace retrieval system for the AI Agent, including a 30x speedup in context gathering

### **Affective Brain Lab, Cambridge MA** - Full Stack Developer

AUGUST 2023 - SEPTEMBER 2024

- Led the development of a Chrome plugin to promote mindful web searching and reduce doom scrolling, including continued documentation of all new code and systems
- Improved UX through increased speed of JavaScript frontend and AWS backend using parallelization and optimizations, resulting in up to 8x speed increase
- Implemented new RESTful API to access scores in DynamoDB and use on the frontend UI
- Continued development on Android mobile app as a project manager, efficiently allocating workload to multiple student researchers
- Mentored student researchers working on the project, increasing their skills and understanding while helping them make improvements to the system itself

### **Artemis Steelworks, Cambridge MA** - Undergraduate Researcher

MARCH 2023 - NOVEMBER 2023

- Designed and demonstrated a molten regolith electrolysis reactor to produce steel from lunar regolith as a finalist of the 2023 NASA Big Idea Challenge
- Led the development of an ultrasonic vibrator subsystem to reduce corrosion due to oxygen gas generation, contributed to various research aspects during initial phases, and participated in final assembly of the reactor

## EDUCATION

### **Massachusetts Institute of Technology (MIT), Cambridge MA**

*Prospective Masters of Engineering in Computer Science and Engineering*

SEPTEMBER 2024 - On Pause

### **Massachusetts Institute of Technology (MIT), Cambridge MA**

*Bachelors of Science in Computer Science and Engineering*

SEPTEMBER 2020 - MAY 2024

Major in Computer Science and Engineering. Double minor in Mathematics and Philosophy.

GPA: 4.1/5.0

## **CERTIFICATIONS & AWARDS**

Java SE 7 Programmer I Certification (*Oracle, December 2018*)

Big Picture Award (*NASA BIG Idea 2024, November 2024*)

## **PUBLICATIONS**

Hoffman, Jeffrey A.; Lordos, George C.; et al. "Producing Lunar Steel and Oxygen using Molten Regolith Electrolysis." *American Institute of Aeronautics and Astronautics*. AIAA 2023-4794

Kelly, Christopher; Fontanez, Jonatan; Sharot, Tali. "A Tool to Facilitate Web-Browsing." Digital print, arXiv:2410.03866

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