Elliot Miller

734-223-7401 | [Website](#) | elliotgrantmiller@gmail.com | linkedin.com/in/elliotgmiller | github.com/elliotmiller18

EDUCATION

University of Michigan — Ann Arbor, MI
Bachelor of Computer Science — *Expected Dec 2026*

- Relevant Coursework: Data Structures and Algorithms, Computer Theory, Computer Organization, Web Systems, Operating Systems, Compilers, Game Development, Programming Languages, Formal Verification of Systems Software

EXPERIENCE

Software Developer (Rust) — Jan 2026 – May 2026
N1 → Founder's Fund — *New York, NY*

- Incoming Software Engineering intern where my primary roles will be maintaining a TypeScript targeting compiler and writing low-level networking code.

Backend Developer (Typescript) — May 2025 – August 2025
Wise Pelican — *Phoenix, AZ*

- Worked on an autonomous AI agent that provided marketing services to customers, reaching ~2000 contacts and generating ~150 custom marketing assets per day
- Wrote AWS Serverless Lambdas in TypeScript, for purposes including image processing, SMS/MMS handling, and interfacing with human sales
- Migrated application from Azure to AWS ECS with a CodePipeline CI/CD setup, decreasing average runtime from 10s to 2s by removing AWS to Azure performance bottleneck in application and increasing the concurrency of image data downloading, processing, and uploading
- Wrote a from-scratch fast JPEG metadata decoder, cutting off over 95% of runtime from the previous implementation by reducing data needed to process per JPEG from MegaBytes to a single KiloByte

PROJECTS

GameBoy Emulator (C++) [Github](#)

- Simulated all GameBoy hardware components, including a Z80 Sharp CPU, internal clock circuits, interrupts, and proprietary graphics/audio chips
- Achieved consistent a consistent 300 frames per second using a custom SDL-integrating renderer on an M1 Macbook with integrated graphics

Wordle Bot (Python) [Github](#)

- Created a Wordle algorithm using a mix of heuristics including frequency of words/characters in the English language, scoring words and sorting them by likelihood
- Achieves an average guess count of 3.36 over the last 2 years of words, compared to the human average of 3.97

MapReduce Implementation (Python)

- Created an efficient recreation of the MapReduce algorithm using a distributed systems setup
- Wrote communication protocols between the Manager and Worker servers

Snake Compiler (Rust, x86)

- Wrote an x86 emitting, optimizing compiler for a Python/OCaml hybrid language called Snake

Lambda Vending Machine (TypeScript)

- Full stack webapp in TypeScript that allows non technical users to create callable endpoints in AWS using Anthropic's API
- Managed concurrent requests from users with a custom job queue

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, C++, CSS, HTML, SQL, ARM, Rust, x86_64, Dafny, OCaml
Libraries/Frameworks: React, Node.js, Flask, SQLite, PostgreSQL, Django, SDL, AWS CDK/SDK
Developer Tools: Git, AWS, AWS Lambdas, Docker, MacOS, Linux, NVim