STEPHEN NAH

snah@andrew.cmu.edu 201-625-5229
https://stephennah.tech https://github.com/snah0902

EDUCATION

Carnegie Mellon University **Pittsburgh, PA**
Bachelor of Science in Computer Science, Minor in Physics | **GPA:** 3.89/4.0 *May 2025*
Relevant Courses: Database Systems, Compiler Design, Introduction to Computer Systems, Advanced Computational Physics, Algorithm Design and Analysis, Parallel and Sequential Data Structures and Algorithms, Principles of Functional Programming

EXPERIENCE

Software Development Engineer Intern **Seattle, WA**
Amazon *May 2024 – August 2024*
- Built a per-tenant workflow provisioner for fraud and risk mitigation
- Implemented AWS Step Functions, Amazon S3, and AWS Lambda infrastructure using AWS CDK in Typescript
- Designed interface definition with API Gateway integration using Smithy

Software Engineering Intern **Pittsburgh, PA**
CMU Computer Science Academy *January 2024 – May 2024*
- Built and maintained CS Academy website interface with React and Redux
- Collected students' keystroke data for plagiarism detection using Django

Teaching Assistant **Pittsburgh, PA**
Carnegie Mellon University *January 2023 – Present*
- Lead weekly recitation lectures and hold office hours for Principles of Functional Programming
- Provide feedback on hundreds of students' homework assignments and exams

CMU Computer Science Academy CPCS/Outreach Team **Pittsburgh, PA**
CMU Computer Science Academy *July 2022 – December 2023*
- Designed and reviewed content for online Python curriculum for high school students and CMU students enrolled in introductory programming course
- Co-led professional development sessions to teach course content to high school teachers

Supplemental Instruction Leader **Pittsburgh, PA**
Carnegie Mellon University *August 2022 – December 2022*
- Led weekly study sessions for Physics I for Science Students, promoting engagement through collaborative activities

PROJECTS

C0 Compiler
Compiler Design Project *May 2024*
- Developed a Rust-based compiler for C0, a safe subset of C
- Applied series of optimizations which outperformed GCC benchmarks
- Integrated LLVM support and compilation for 32-bit x86 assembly

Sprintdle
Personal Project *August 2023*
- Built a website application inspired by Wordle using HTML/CSS and Javascript
- Implemented multiple diverse game modes such as Classic, Frenzy, and Survival
- Designed a how-to-play section and a statistics section based off local storage

paigeBot
Personal Project *January 2023*
- Created a social media application that quizzes users about images from entertainment media
- Used Python to request from multiple database APIs and scheduled coroutines concurrently

Cold Gravitational Collapse Simulation
Introduction to Computational Physics Project *December 2022*
- Simulated three-dimensional N-body system using particle-mesh (PM) method
- Evolved gravitational collapse and explored resolution limitations of PM code
- Utilized Python libraries such as numpy, matplotlib, and scipy

SKILLS

Languages: Python, C/C++, Rust, Java, OCaml, Standard ML, HTML/CSS, Javascript/Typescript, SQL, R, Prolog
Other: Git, OpenMP, OpenACC, MPI, Apache Spark, TensorFlow, x86 assembly, React, LaTeX, Autodesk Inventor