

STEPHEN NAH

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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, Networking and the Internet, Machine Learning, Algorithm Design and Analysis, Foundations of Programming Languages, Advanced Computational Physics

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 – Present

- Build and maintain CS Academy website interface with React and Redux
- Collect 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