Michael Sheng

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https://github.com/crystaltine https://msh379.me /in/michael-sheng-1aa558280/

Education

Georgia Institute of Technology

Aug 2024 – *Jun 2027 (Anticipated)*

Current, B.S., Computer Science

GPA: ~ / 4.00

Relevant Coursework: Data Structures & Algorithms • Discrete Math • Multivariable Calculus • Linear Algebra

Experience & Projects

Software Developer

Atlanta, GA

Hexlabs

Nov 2024 – Present

¤ Developed and maintained full-stack system, including authentication APIs, database management, and applications for running events and hackathons

¤ Collaborated with multiple teams to design efficient backend services and intuitive web interfaces

Framework Developer & Maintainer

Project

Pixelterm

Feb 2024 – Present

¤ Created and currently maintaining Python graphics rendering library for ANSI-based terminals and published on PyPI

¤ Implemented NumPy backend to maintain a manipulable and vectorized buffer of pixels, improving rendering efficiency by over 300%

¤ Gained experience packaging projects, writing documentation, and developing maintainable code

Full-Stack Developer

Project

Floracosm

Aug 2023 – Present

¤ Created full-stack climate research crowdfunding website using React, Express, Microsoft SQL Server, Microsoft Azure, and Stripe

¤ Implemented custom JWT authentication system, email verification, REST API, and efficient data structures on server-side for handling web traffic and incoming user data

¤ Learned fundamentals of system design, responsive design, and production software

Research Intern

Remote

Los Alamos National Laboratory

Jul 2023 – Oct 2023

¤ Collaborated with Li Tang at Los Alamos on vectorization of tensor-related operations in the Polybench benchmark suite and other algorithms using PyTorch and NumPy

¤ Improved efficiency by up to 10-20x for traversal/search on 300k+ edge graphs, FDTD calculations, and Cholesky decompositions compared to traditional implementations

Student Research Participant

Albuquerque, NM

JSTI West 2023

Jun 2023

¤ Developed tracer advection modeling framework with student research group and mentor from Los Alamos National Laboratory

¤ Applied framework to build open-source proof-of-concept weather forecast tool

¤ Improved collaborative skills and project management in a research setting

Technical Skills

Languages

Python • C++ • Typescript • Javascript • Java • HTML

Tools/Frameworks

React • NumPy • PyTorch • Microsoft Azure • SQL Server • Stripe • Electron • Tensorflow.js • Express.js • Tailwind CSS • REST APIs • JWT • SDL2 • Git • Excel • Full-Stack Development • Deep Reinforcement Learning • UI/UX/Graphic Design