Michael Sheng

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EDUCATION

Georgia Institute of Technology   Atlanta, GA
Bachelor of Science in Computer Science; GPA: 4.0/4.0   *Expected Graduation: May 2027*
Relevant Coursework: Data Structures & Algorithms, Computer Architecture, Differential Equations, Multivariable Calculus, Intro UI Design

EXPERIENCE

Software Developer   Nov 2024 – Present
Hexlabs, Inc.   *Atlanta, GA*
- Maintained authentication and database components for HackGT registration pipeline, integrated **REST API endpoints** with **MongoDB** and **PostgreSQL**, and developed efficient system design capable of handling **2,500+ participants** at HackGT events
- Collaborated with Design, Operations, and Marketing teams to effectively deploy websites for the organization's workflow for HackGTeeny 2025 and HackGT Archive

Student IT/Web Engineer   Jan 2025 – Present
Georgia Tech College of Sciences   *Atlanta, GA*
- Maintained official academic websites for several departments such as the *School of Earth and Atmospheric Sciences* and *Southeast Center for Mathematics and Biology* using **Drupal CMS, PHP, WSL, Docker, and DDEV**
- Supported University Computing Services as a part-time student worker, providing IT and web support for College of Sciences academic and research personnel
- Fulfilled general IT requests through Georgia Tech's RT **ticketing and issues system**, streamlining the **CI/CD pipeline** to preserve uninterrupted faculty workflow

Undergraduate Research Assistant   Jan 2025 – Present
Rahnev Lab, Georgia Tech College of Sciences   *Atlanta, GA*
- Led an independent project in collaboration with Herrick Fung studying **computational bases of human visual perception**, low-level sensory uncertainty, and processes of estimating decision confidence
- Constructed and analyzed performance of variable-depth **convolutional neural networks (CNNs)** to replicate human visual processing
- Developed **statistical models** to distill differences between artificial and human responses to visual stimuli (e.g. Gabor patches) and differing mechanisms of **Bayesian confidence reporting**

PROJECTS

Floracosm | *React, Microsoft Azure, SQL Server, Typescript, Express, JWT, Stripe*   Jul 2023 – Present
- Created production-quality fullstack climate research crowdfunding website using **React, Express, Microsoft SQL Server, and integrated payments with Stripe**, all deployed on Microsoft **Azure App Service**
- Implemented custom **JWT authentication system**, SMTP email verification, custom API error boundaries, and efficient data structures for securely handling **high-frequency web traffic**.

Pixelterm | *Python, NumPy, Git*   Jan 2024 – Jun 2024
- Created blazingly fast RGB-ASCII **graphics rendering framework** in Python for rendering images, videos, and graphical games in the command line
- Achieved over **200% rendering optimizations** by implementing **frame buffers with NumPy vectorization**
- Published package on PyPI with **strongly-typed** outward facing API and comprehensive docstrings, gaining **1,300+ downloads**

TECHNICAL SKILLS

Languages: Python, Rust, Java, Typescript, Javascript, C++, C#, HTML/CSS
Frameworks: ReactJS, NumPy, PyTorch, MongoDB, PostgreSQL, Stripe, Tauri, Electron, Tensorflow.js, Express, Tailwind CSS, shadcn/ui, Chakra UI
Technologies: Microsoft Azure, SQL Server, REST APIs, JWT, Git, WSL, Docker, Full-Stack Development, Deep Reinforcement Learning, UI/UX Design
Awards: MIT Battlecode 2025 Finalist, 5x AIME Qualifier