Yihao Mai

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EDUCATION

Georgia Institute of Technology, Atlanta, GA
Bachelor of Science in Computer Science, ***May 2025*** ***GPA: 3.9/4.0***
Master of Science in Computer Science, Expected: ***May 2026*** ***GPA: 4.0/4.0***
Honors: *Dean's List, Faculty Honors, Presidential Scholar*

SKILLS

Languages: Java, Python, Java/TypeScript, C#, C, C++, SQL, HTML, CSS, R, LaTeX
Front-end: React.js, React Native, Next.js, Angular, Bootstrap, Material UI, Tailwind CSS, Selenium
Back-end: Spring, Spring Boot, Express.js, Node.js, Firebase
Database: MySQL, PostgreSQL, MongoDB
Development Tools & Methods: Git(Hub), Trello, Agile, Scrum, Jupyter, Docker, Kubernetes, CI/CD(GitHub Actions, Tekton), AWS(EC2, SES, S3, Lambda, DynamoDB), Azure(VM, PostgreSQL Server, App Service)

WORK EXPERIENCES

Tyler Technologies - *Software Developer Intern* May 2025 - Present

- Implemented a system task configuration page with Angular components and backfill SQL scripts, received **66** votes in Tyler Community, ranking it as the **top-rated** feature of the year
- Safeguarded **$100K** ADA audit investment by resolving **128** accessibility issues in Angular components, achieving full WCAG 2.2 compliance
- Diagnosed and fixed over **10** high-priority (P1-P3) Angular bugs by leveraging the debugger and network inspection in Chrome DevTools

Georgia Tech D2I Lab - *Research Assistant* - Link Aug 2024 - Present

- Designed database schemas and structured **millions** of OpenAlex research records in Azure PostgreSQL, enabling self-controlled data management and serving as the primary data source for the funded CollabNext project
- Leveraged EXPLAIN ANALYZE to refine queries and created materialized views to cache complex query results, reducing runtime from **seconds** to **milliseconds**, a **90%** speedup
- Defined ontology mapping schemas and utilized Ontop to convert **billions** of relational data into RDF format, significantly enhancing the product's scalability and enabling advanced semantic queries

JobOclock - *Full Stack Software Engineer Intern* Aug 2024 - May 2025

- Developed an automated email processing pipeline using AWS SES, S3, and Lambda to extract information (e.g., sender company, verification links/codes) from job application emails and store them in DynamoDB for efficient data access and application follow-up communication
- Built and deployed a Spring Boot email server on AWS EC2 with DynamoDB integration, reducing job application time from **5+** minutes to a single click and enabling users to efficiently apply to **100+** applications

IBM - *Research Intern* - Link May 2024 - Jul 2024

- Collaborated with an IBM research team to achieve compliance-as-code automation in the Compliance Trestle open-source project, resulting in **1000+** LOCs, **10+** closed issues, **15k** monthly downloads
- Identified and resolved bugs with Python to improve the project's stability, refactored the project's webpage and CLI documentation, updated existing demos to the latest Trestle version, and added new demos to address additional use cases
- Independently implemented Tekton pipelines to replace existing GitHub Action pipelines for a sub-project, addressing internal restrictions and ensuring the project's pipeline remained operational

PROJECTS

BuzzLink (Course Project) - *Full-Stack Developer* - Link Jan 2025 - May 2025

- Collected the first-ever dataset of **1,379** Georgia Tech alumni profiles through Selenium and Relevance AI
- Developed a RAG chatbot using LangChain, Qdrant vector store, and OpenAI models to enable conversational discovery of alumni LinkedIn profiles beyond traditional filters
- Designed and deployed a React UI and FastAPI-based backend, integrating the RAG chatbot into a full-stack application for seamless student–alumni engagement

Swift Label Matcher (Client-Based Project) - *Software Developer* - Link Nov 2023 - Jan 2024

- Developed a Python Tkinter GUI integrated with Pandas and PyMuPDF to automate and streamline the retrieval and printing of shipping labels, addressing e-commerce order packaging challenges
- Designed a sorting feature that eliminates the tedious manual effort of reordering **hundreds to thousands of** labels
- Achieved an **80%** reduction in package processing time