

Matthias Druhl

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Education

Georgia Institute of Technology

Major: Computer Science

Threads: Information Infonetworks / Intelligence

Atlanta, GA

Expected Graduation: December 2026

Professional Experience

United States Air Force, EDDGE

Software Engineering Intern - Team Lead

Macon, Ga

May 2025 - Present

- Administered development of a RAG-based web application that translated scanned PDFs into Rust code using Ollama and Langchain, cutting down code generation time by 75%
- Constructed a full-stack web application (HTML/CSS/JS frontend, Flask / FastAPI backend, Celery Task Scheduler) comprising six interconnected Docker containers for asynchronous and efficient workflow management
- Incorporated a dedicated Rust unit testing container to compile and validate LLM-generated code, catching errors at a 90% success rate

United States Air Force, 402 Software Engineering Group

Software Engineering Intern

Warner Robins, GA

June 2023 - August 2024

- Engineered and deployed a YOLO-based computer vision model via Roboflow to enable autonomous vehicle navigation across diverse terrains, achieving real-time object detection with 92% accuracy
- Collaborated in Agile Scrum sprints to build embedded system simulations, completing implementation 40% ahead of deadline
- Designed and assembled microcontroller based circuits and programmed control systems in Python to simulate flare dispensing for military aircraft

Featured Projects

UniLease - Student Sublease Marketplace (In Progress)

Golang, React.js, TypeScript, AWS, MongoDB, Redis

- Engineered a full-stack, containerized (Docker) student sublease marketplace using a multi-service architecture (React.js/TypeScript frontend, Go backend, MongoDB, Redis) to connect students needing temporary housing
- Created a Go backend with RESTful APIs, WebSocket real-time messaging, and AWS S3 for image handling, complemented by a React.js/TypeScript frontend for intuitive user experience
- Integrated a comprehensive OIDC authentication system with AWS Cognito for secure user management, while implementing end-to-end security measures (CSRF, rate limiting, secure headers) and monitoring for system health

AppliTrack - Automated Job Application Tracker

Node.js, React.js, TypeScript, PostgreSQL, Docker

- Produced a Full-stack job tracking platform with AI-powered email parsing, Chrome extension integration, and automated job data extraction from any website
- Developed a chrome extension with universal job detection capabilities, intelligent web scraping, and real-time synchronization with backend API for seamless job application management
- Integrated Gmail, Outlook, and Google Gemini AI API's for intelligent email content analysis and automated job status updates with OAuth2 authentication and secure token management

Qwyse - AI Resume Generator (Team Lead)

Express.js, React.js, Node.js, Azure AI Studio, SQL

- Directed a team of five engineers in launching an AI resume builder, achieving a 95% user satisfaction rate based on feedback surveys regarding resume quality and content relevance
- Spearheaded incorporation of Azure AI Studio's API into the resume builder frontend, providing immediate, ATS-aligned guidance to users improving resume scores by an average of 20 points
- Orchestrated the integration of Azure AI Studio with a SQL database through Node.js, ensuring consistent and personalized resume outputs; this reduced system errors by 15% and improved data accuracy

Technical Skills

Programming Languages: Python, Java, Javascript, Typescript, C, Assembly, SQL, HTML/CSS, Golang

Frameworks & Libraries: React.js, Node.js, Express.js, TensorFlow, Oauth, Pandas, Firebase, Tailwind, Flask, FastAPI

Cloud & Tools: Git, Docker, Jupyter, Figma, Microsoft Azure, MySQL, Linux/Unix, Android Studio, AWS, Jest