

# Matthias Druhl

Georgia Institute of Technology, Atlanta, GA

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## Education

Georgia Institute of Technology

Atlanta, GA

Major: Computer Science

Expected Graduation: December 2026

Threads: Information Infonetworks / Intelligence

## Professional Experience

United States Air Force, EDDGE Team

Macon, Ga

Software Engineering Intern - Team Lead

May 2025 - Present

- Led development of a web application to convert scanned PDFs containing microcontroller instructions into Rust code leveraging a RAG-augmented, LLM architecture with locally hosted Ollama instances
- Constructed a full-stack web application (HTML/CSS/JS frontend, Flask / FastAPI backend) comprising six interconnected Docker containers for efficient workflow management
- Incorporated a dedicated Rust unit testing container to compile and validate LLM-generated code, guaranteeing functional output automatically

United States Air Force, 402 Software Engineering Group

Warner Robins, GA

Software Engineering Intern

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

AI Resume Generator - Team Lead

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

Student Sublease Marketplace

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

Spotify Wrapped Generator

Kotlin, Java, XML, Firebase

- Developed a native Android application in Android Studio, integrating Spotify's API to extract user listening data (top songs, artists, genres) and generate personalized "Spotify Wrapped" summaries
- Designed a secure user login using Firebase Authentication and Firestore database integration, resulting in 100% secure storage, viewing and sharing of personalized Spotify summaries, and zero data loss

## Technical Skills

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

**Frameworks & Libraries:** React.js, Node.js, Express.js, TensorFlow, OpenCV, Pandas, Firebase, Tailwind, Flask

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