

Aidan Holton

Software Engineer | Computer Vision & Applied ML | CS/ML Student
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EDUCATION

University of North Georgia, B.S. in Computer Science, Minor in Machine Learning *Aug 2022 - Present*
Relevant Coursework: Software Engineering, Machine Learning, AI in Manufacturing, Web Programming, Databases, Introduction to UNIX, Secure Software Development, Digital Information Processing, Data Structures and Algorithms, Networking

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, SQL, HTML, CSS
Frameworks & Libraries: Next.js, React.js, Node.js, Express.js, Tailwind CSS, LangChain, YOLO, Pytesseract
Tools & Platforms: Docker, AWS, Supabase, PostgreSQL, Git, SSMS
Other: CVAT

WORK EXPERIENCE

Gilat DataPath (via Georgia Tech PIN Program) **Duluth, GA**
Software Engineer Intern | Python, YOLO, Pytesseract, PDFPlumber, CVAT, Docker, Claude Code *May 2026 - July 2026*

- Built and deployed a computer vision pipeline that validates hardware engineering drawings against their Bill of Materials, cutting manual review time from ~10 minutes to 1–3 minutes per drawing.
- Trained a YOLO object detection model to 99.5% accuracy for detecting part-number balloons on drawings, using SAHI tiling for small-object detection and a self-annotated dataset built in CVAT.
- Engineered OCR and table-extraction stages using Tesseract and pdfplumber, handling structural edge cases including split tables, CID-encoded fonts, and fallback extraction paths.
- Built a driver generation tool that parses vendor SNMP MIB files and produces TCL device drivers automatically, replacing manual config writing with a two-command workflow; integrated an optional local LLM for gap-filling ambiguous fields.

University of North Georgia, Office of Data Strategy **Dahlonega, GA**
Data Engineer Intern | SSMS, SQL, TSQL, JSON *Jan 2026 - May 2026*

- Developed structured JSON semantic definitions for reporting views as part of a RAG AI prototype, establishing a consistent semantic format to support future view integration within the semantic layer.
- Wrote SQL queries to extract and aggregate institutional data, building relational tables for UNG's annual Common Data Set to support standardized reporting requirements.
- Designed and documented logical ER diagrams for each domain within UNG's Enterprise Data Warehouse, improving visibility into schema structure and standardizing domain-level documentation across the warehouse.
- Reviewed and expanded technical documentation to align with current database structures.

University of North Georgia, IT Service Desk **Dahlonega, GA**
IT Help Desk Technician | Technical Support, Hardware & Software Troubleshooting, ServiceNow *Jan 2024 - May 2026*

- Provided in-person Tier 1 technical support to 20,000+ students, faculty, and staff, ensuring timely resolution of hardware, software, and account-related issues across Windows and macOS environments.
- Assisted with account provisioning, password resets, and MFA enrollment, maintaining secure access to university systems in accordance with IT policies.
- Diagnosed and resolved workstation, printer, and network connectivity issues on-site, minimizing disruptions to academic and administrative operations.
- Assisted users with common productivity tools and campus systems, including login access, email configuration, and application troubleshooting.

PROJECTS

Lucrum | TypeScript, Next.js, TailwindCSS, Node.js, Express.js, Docker, AWS, Supabase, LangChain, Git *Feb 2026 - Apr 2026*

- Designed and deployed a full-stack, AI-powered personal finance application using a microservices architecture, with four independently deployed services live at lucrumproject.com.
- Built a Next.js frontend with secure JWT authentication via HTTP-only cookies and middleware-based route protection, connected to three separate backend REST APIs.
- Integrated Claude (via LangChain's ChatAnthropic) into a dedicated Account Summary Service to generate personalized, AI-powered financial summaries and actionable recommendations from a user's income and expense data.
- Implemented separate Account Management and Income Management services in Node.js/Express, handling user authentication with bcrypt password hashing and scoped PostgreSQL queries via Supabase.
- Containerized all backend services with Docker and deployed to AWS EC2 with custom subdomains per service; frontend deployed on Vercel.