ANTHONY HAM

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Education

Florida International University　　　　　　　　　　　　　　　　　**Expected April 2026**
Bachelor of Science in Computer Science; GPA: 3.9/4.0　　　　　　　　　　　　　*Miami, FL*
Relevant Coursework: Data Structures & Algorithms, Algorithm Techniques, Object Oriented Programming, Systems Programming, Operating Systems, Computer Architecture, Database Design & Management, Human Computer Interaction, Computer Networks

Technical Skills

Languages: C++, C, C#, Java, Python, SQL (PostgreSQL, MySQL), TypeScript, JavaScript (ES6+), Go
Technologies/Frameworks: React, MongoDB, Django, Flask, .NET, pandas, NumPy, Figma

Experience

Amazon　　　　　　　　　　　　　　　　　　　　　　　**September 2025 - Dec 2025**
Software Development Engineer Intern　　　　　　　　　　　　　　　　　　*Seattle, WA*
- Architected enterprise **Model Context Protocol (MCP) server** enabling natural language queries across organizational knowledge bases, allowing non-technical users to access domain-specific information with **sub-500ms** response times for **95%** of queries.
- Designed intelligent **routing layer** that orchestrates queries across multiple knowledge bases simultaneously, implementing **response consolidation** and **ranking algorithms** to deliver unified, contextually relevant answers from disparate data sources.
- Engineered scalable **workforce solutions** platform using **AWS Lambda**, **ECS**, and **DynamoDB**, integrating with existing organizational systems while maintaining **99.9%** service availability and enterprise security compliance.
- Implemented automated **knowledge base integration pipelines** with real-time content synchronization and natural language processing capabilities, reducing information retrieval time by **75%** and enabling seamless access to organizational documentation for **1000+** workforce users.

Google　　　　　　　　　　　　　　　　　　　　　　　**May 2025 − August 2025**
Software Engineer Intern　　　　　　　　　　　　　　　　　　　　　　*Seattle, WA*
- Built dependency-free **web components** for Google's end-to-end sharing library from scratch in **TypeScript**, aligned with Google's Material 3 design system and accessibility standards to improve reusability and maintainability.
- Refactored legacy components by removing internal dependencies and validating tradeoffs with in-depth **binary analysis**, reducing **binary size by 45–50%** and enabling integration with binary-sensitive products such as **YouTube, Maps, and Search**.
- Authored comprehensive **design docs** and **test plans** covering API design, architecture, and rollout strategy, which streamlined cross-team adoption of leaner components.
- Expanded automated QA by implementing **screenshot, interaction, and screen-reader tests** with **Jasmine** and a custom WebDriver, raising test coverage and reducing regressions.
- Delivered production-ready demos showcasing accessibility compliance and consistent cross-platform behavior, securing stakeholder confidence and driving rollout of the new components.

State Farm　　　　　　　　　　　　　　　　　　　　　　**May 2024 − August 2024**
Software Engineer Intern　　　　　　　　　　　　　　　　　　　　　　*Tempe, AZ*
- Designed and deployed an **AWS Lambda** function to stream real-time responses from **Amazon Bedrock**, reducing LLM inference latency by **40%** and accelerating internal data science workflows.
- Built a **GPU monitoring system** across **State Farm's AWS AI platform environments**, tracking **100+ active notebooks** and enforcing usage policies, which improved infrastructure visibility and resource efficiency.
- Developed and rolled out a custom **JupyterLab extension** used by **50+ ML engineers and data scientists**, streamlining access to internal tools and improving productivity in model development.
- Provisioned and deployed a **Weaviate** vector database cluster on **AWS EC2**, enabling semantic search over thousands of internal documents and enhancing knowledge discovery across teams.

FIU Applied Research Center　　　　　　　　　　　　　　　**December 2023 − December 2024**
Software Engineer Intern　　　　　　　　　　　　　　　　　　　　　　*Miami, FL*
- Developed multiple **React** applications for federal clients including **US DOE** and **DOT&E**, enabling visualization of ML research capabilities and improving client engagement with prototypes.
- Built a full-stack **C# .NET** ML playground where government officials could beta test document summarization, object detection, segmentation, and conversational AI, accelerating stakeholder feedback cycles.
- Designed intuitive UI/UX, database architecture, and co-developed **REST APIs** to integrate frontend with ML services, streamlining end-to-end research workflows.
- Led migration of a legacy WebForms application to **Blazor**, which improved performance, modernized the stack, and reduced long-term maintenance overhead.

Projects

AI-Powered Stock Analysis Platform | *React, Next.js, TypeScript, Python, Prophet, OpenAI API, AWS*
- Built a full-stack financial platform with interactive stock charts and AI-driven market trend analysis.
- Crafted conversational AI interface using **OpenAI API** for natural language stock queries, increasing user engagement by **35%**.
- Integrated Meta's **Prophet** forecasting model providing predictive stock analysis with **78%** directional precision in test scenarios.

Empty Classroom Finder for FIU | *React, Next.js, Tailwind CSS, MongoDB, Node.js, Python, Selenium, REST APIs*
- Programmed an asynchronous web scraper achieving **99.9% reliability** for real-time university classroom data collection.
- Constructed mobile-responsive **SPA** using **Next.js/Tailwind** serving **6,000+ users** with subsecond load times.
- Added user feedback system to drive feature development, increasing user retention by **40%**.