

Steven DeFalco

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Education

Stevens Institute of Technology

MBA & MS in Applied Artificial Intelligence

BS in Computer Science, Highest Honors (GPA: 3.86)

Hoboken, NJ

January 2025 – May 2026

September 2021 – December 2024

Marine Academy of Science and Technology

Highlands, NJ

Experience

TCE

Great Neck, NY

AI Solutions Engineer

May 2025 - Present

- Led end-to-end redesign of an Azure-native AI chatbot for internal engineers, executives, and estimators—integrating query rewriting and hybrid semantic/vector retrieval (Azure AI Search, OpenAI API, Python, LlamaIndex). Boosted *good-answer rate* from 50% → 98% and *answer rate* from 74% → 98% on a 100-query A/B test, enabling rapid access to insights across hundreds of sensitive contract and technical documents, ensuring data privacy compliance.
- Fully rebuilt document ingestion & RAG pipeline (LlamaParse → Markdown, custom chunking, embeddings; Azure Blob + SQL; Azure AI Search index), increasing *top-1 citation relevance rate* from 32% → 76% and *highlight accuracy rate* from 10% → 56%. Collaborated with non-technical stakeholders to define requirements and present results.
- Designed, developed, and deployed a tunnel-clearance calculator PWA in Ionic/React (TypeScript) for offline field use, replacing manual and paper-based clearance checks. Enabled in-field safety verification for MTA-regulated tunnel installations, reducing turnaround and mitigating risk of costly compliance violations. Delivered native-like UX with offline caching, in-app updates, and CSV export in owner-specified format, hosted on Azure.

Innovation Engineering Intern

May 2024 - August 2024

- Automated migration of 1,000+ internal LMS courses using Python (Pandas, APIs, Playwright), eliminating manual effort and proving a scalable automation approach.
- Built Azure Timer Functions to sync HR and LMS data in near real time, enabling accurate mass training assignments.
- Delivered a secure React portal for hosting site drone imagery, providing open team access and avoiding licensing costs.

Pixel Light Digital Media

Lyndhurst, NJ

Software Testing & Quality Assurance Analyst

June 2022 - August 2022

- Led testing of real-time computer vision system for convention booth engagement tracking; improved distance prediction accuracy to within 2 ft. in 50 ft. range. Produced business insights using 51k+ data points to optimize booth layouts and increase marketing ROI. Collaborated with developers to deliver stability and reliability to enterprise clients.

Stevens Institute of Technology

Hoboken, NJ

Computer Science Course Assistant

September 2022 - May 2023

- Led labs for Data Structures courses with live coding and personalized instruction, contributing to a 98% pass rate.

Projects

@predictMLB (Summer 2023): Built and deployed an autonomous X/Twitter bot on AWS Lightsail (Python, MLBStats-API, cron) that posts same-day MLB game predictions using a custom LightGBM model trained on over 5 years of historical data with fully automated data pipelines, achieving 66% predictive accuracy on a 1,100-game backtest.

Coursework

NLP, Computer Vision, Deep Learning, Database Management, Statistics, Data Structures & Algorithms

Skills and Technologies

Languages: Python, SQL, TypeScript, JavaScript

Technologies: Azure, Azure AI Search, Azure Functions, OpenAI API, LlamaIndex/LlamaParse, LLMs, MCPs, Ionic/React (PWA), Git, CI/CD, Linux, Prompt Engineering, LaTeX

Leadership & Community

Vice-President of Alpha Sigma Phi (Alpha Tau): Led a 40-member chapter; oversaw 25 events/semester; achieved a 91% median attendance rate; coordinated event logistics and scheduling; oversaw conflict resolution.