

Nicholas James Capriotti

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Summary

New grad SWE with experience leading an Azure-based AI project for JPL, scaling data pipelines for enterprise systems, and building full-stack applications with Javascript and various database methods.

Experience

Software Development Intern, CashOn - San Jose, CA

Sep 2024 - Jan 2025

- Refined the rental estimates system by introducing **TS/JS** and **PostgreSQL** logic to remove stale data points with a variable refresh rate, removing over 12,000 old estimates, ensuring users have constant access to the freshest available rental data.
- Streamlined data collection with **Chrome** storage caching, enabling resumption of background data scraping across sessions, prioritizing gathering data for new properties before refreshing old data.
- Devised a filter-based fetching strategy to bypass Zillow's 500-property API cap.

Engineering Intern, Meritage Homes - Scottsdale, AZ

May 2023 - Dec 2023

- Revamped **SQL** Server schema to align with new data sources, syncing 30,000+ customer records with minimal downtime.
- Rewrote 30+ **Python** ETL scripts with **Snowflake** to sync with new data sources, working alongside a team from Data Ideology to switch our source endpoints without disruption to production data.
- Assigned role based access controls with the DevOps team using **Azure**, tailoring permissions for multiple departments to block unauthorized access risks in a sprawling org.

Projects

Cloud Based Retrieval Augmented Generation Platform

Azure, Python/Streamlit, LLMs

- Led a Capstone team that designed and implemented an **Azure**-based RAG system to explore mission-critical generative AI applications for the Jet Propulsion Laboratory.
- Architected an **Azure**-based backend, enabling users to query **Azure AI Search** and receive **GPT-3.5** powered responses to operational questions, achieving a **72% reduction in hallucinations** compared to general use systems
- Defined critical **system requirements** with JPL **stakeholders**, establishing strict project guidelines.
- Instructed JPL Engineers on the setup and use of the platform with a detailed **user manual** and through virtual meetings.

Full-Stack Portfolio Application

JavaScript, React, Express, MongoDB

- Architecting a full-stack portfolio platform with **JavaScript, React, and Express**, showcasing web development mastery.
- Engineering **RESTful APIs** with **Express** and **MongoDB**, optimizing data retrieval to handle dynamic project entries and blog posts, leveraging schema flexibility for future-proof feature integration and scalability.
- Designing a responsive UI with **React** and **Ant Design**, delivering a polished, scalable user experience.
- Utilizing **client-side rendering** to improve scalability in case of high user loads.

Localized AI Agent Workflows

JavaScript, Ollama

- Utilized an **N8N** workflow along with **Ollama** AI Models to generate dynamic and insightful blog posts from simple descriptions of things I accomplished that day, automatically updating **Github** to act as a blog of my daily learning.
- Reduced the time it takes to create and upload blog posts by **95%** by using **generative AI** and **human-in-the-loop** methods.
- Shared the tool with other developers, resulting in over **700 users** downloading the workflow for personal use.

Education

Embry-Riddle Aeronautical University – Bachelors of Science in Software Engineering

May 2024

Skills

Languages: JavaScript (React, Express), TypeScript, Python, SQL

Software: Microsoft Azure, Docker, Snowflake, SQL Server, PostgreSQL, PGAdmin, Ollama, Git, ElasticSearch, MongoDB