

Zachary Rippas

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WORK EXPERIENCE

Software Engineer Intern, Wayfair, Boston, MA

07/2023 → 12/2023

- Implemented a full-stack Java/Javascript/React application allowing internal stakeholders to diagnose data pipeline issues by comparing product data across multiple sources and highlighting discrepancies
- Delivered several new end-to-end features and UI enhancements resulting in a **68%** increase in page visits
- Significantly improved the performance of a highly trafficked REST endpoint resulting in a decrease in latency from **10-12** seconds/request to **1-2** seconds/request on average
- Facilitated onboarding of new development team to ensure smooth ownership transfer of internal tool by conducting knowledge transfer sessions and code walkthroughs

Software Engineer Intern, Tive Inc., Boston, MA

06/2022 → 12/2022

- Developed, tested, and documented **10+** REST API endpoints in ASP.NET framework that communicated with back-end services and MS-SQL databases to support the release of new public API
- Enhanced a C#/Typescript/Angular app to support operations in the packaging of refurbished product
- Wrote unit and integration tests with Moq and Bogus to ensure correctness/compliance with product specs
- Communicated directly with project stakeholders to align on requirements, gather feedback, and move quickly through design iterations

Head Swim Coach, Glen Wild Lake Association, Bloomingdale, NJ

07/2019 → 08/2021

- Built and maintained datasets in Google Sheets using custom formulas to automatically calculate, update, and sort **75** swimmers' average and fastest times throughout the season
- Led daily practices, constructed meet lineups, gave small group lessons, and supervised assistants

EDUCATION

B.S. in Computer Science, Northeastern University, Boston, MA

09/2020 → 12/2024

- GPA: 3.8/4.0 | Dean's Scholarship | Dean's List
- Relevant coursework: Object-Oriented Design, Database Design, LLM-Integrated Systems, Artificial Intelligence, Algorithms and Data Structures, Systems Security, Networks and Distributed Systems

TECHNICAL SKILLS

Languages · Python, C#, Java, Typescript, Javascript, SQL (MS-SQL, MySQL), HTML/CSS

Frameworks & Tools · OpenAI Completions API, Spring, React, .NET, Flask, Git, Github, Docker, GraphQL

PROJECTS [source code available at github.com/zatchet]

University Opinion Miner | Python, Gradio

12/2024

- Built a multi-part RAG-based LLM system that determines and summarizes overall public opinion on specific university-related topics via sentiment analysis
- Utilized Llama 3.2 in conjunction with the Python Reddit API Wrapper (PRAW) to retrieve relevant content with **94%** accuracy as well as a custom fine-tuned BERT classifier to filter out unnecessary comments

AI Traffic Optimizer | Python

11/2024

- Designed a genetic algorithm and accompanying GUI to find the optimal placement and configuration of traffic control measures in simulated urban environments to minimize overall congestion
- Achieved a **59%** average reduction in travel time when compared to random intersection layouts
- Used techniques such as random restarts and a decaying mutation rate to avoid converging to local optima

PersistenTown | Typescript, React

04/2024

- Expanded an open-source online game by adding user profile functionality with persistent data storage
- Used Google Firebase services to manage authentication and authorization, and React.js to build a user interface that supports registration, sign in, password reset, user profile display and game history data