Josh Ambrose

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EDUCATION

University of North Carolina at Greensboro

Greensboro, NC

Bachelor of Science in Computer Science

Aug. 2022 - Dec. 2024

EXPERIENCE

Artificial Intelligence Research Assistant

Jan. 2024 – May 2024

UNCG

 $Greensboro.\ NC$

- Explored cutting edge topics in the AI field
- Specialized in natural language processing
- Developed a fine-tuning of the T5 language model for use in aspect based sentiment analysis
- Achieved 6% increase in performance against previously state-of-the-art models in multiple datasets
- Gave multiple presentations detailing the purpose, methodology and evaluation of the ABSA project

Manager and Program Director

Apr. 2016 – Present

Gia

 $Greensboro.\ NC$

- Developed and implemented various stocking and inventory systems / libraries
- Created and curated a modern beverage program based on customer preferences and market trends
- Led cross-functional teams in an original, cooperative atmosphere within an often public-facing profession
- Delivered presentations and engaged in personalized communication, explaining product offerings and answering questions

Projects

StockIt | Angular, Django, PostgreSQL, HTML/CSS, TypeScript, Python

Sep. 2024 – Present

- Developed a full-stack inventory management application automating operations like forecasting, supplier orders, and order tracking
- Utilized Angular to create a dynamic frontend with an intuitive UI, a reporting dashboard, and user session management
- Created a REST API in Django to manage all data requests supporting the functionality of all subsystems across the application
- Implemented secure user authentication and role-based authorization to control access to management features
- Designed and optimized a PostgreSQL database for efficient storage and retrieval

 ${\bf TravelBuddy} \mid {\it Java, HTML/CSS, JavaScript, Spring, Maven, MySQL}$

May 2024 – Present

- Developed a full-stack web application using Spring Boot and Maven, following the MVC architecture
- Implemented interactive maps for users to explore destinations, filter searches, and view service provider details
- Designed and managed a database to store and retrieve service provider information, user reviews, and search preferences
- Enabled service providers to create and manage profiles, showcase their offerings, and increase service visibility

ABSA Aggregate View | Python, NumPy, PyTorch

Jan. 2024 – May 2024

- Developed an NLP model using pretrained T5 transformers for aspect-based sentiment analysis
- Implemented data preprocessing and aspect extraction methods
- Selected best performing permutations of 4-tuple (aspect, category, opinion, sentiment) and aggregated results
- Evaluated performance on labeled datasets resulting in improved precision and recall

Lost Island | C#, Unity

Aug. 2023 – Dec. 2023

- Developed a single-player VR exploration game in Unity with a large interactive environment
- Coded VR-specific controls and player interactions
- Designed and integrated puzzles that challenge players with realistic physics
- Collaborated with small team to design and create features

TECHNICAL SKILLS

Languages: Java, Python, C/C++, C#, JavaScript, TypeScript, HTML, CSS, SQL, Bash

Frameworks: Node.js, React.js, Angular, Spring Boot, Django, Flask, Tailwind

Developer Tools: Git, Docker, Maven, Jira, Postman, Jenkins, VS Code, Visual Studio, IntelliJ

Libraries: pandas, NumPy, Matplotlib, PyTorch, TensorFlow, scikit-learn, Keras