

Castle Ford

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EDUCATION

University of Tennessee at Chattanooga

Chattanooga, TN

B.S. Computer Science: Software Systems, Minor: Entrepreneurship

Dec 2024

- Honors: Summa Cum Laude
- Relevant Coursework: Software Engineering, Database Systems, Advanced Data Analytics, Information Security

TECHNICAL SKILLS

- **Languages:** JavaScript (TypeScript), Python, SQL, HTML, CSS
- **Tools/Frameworks:** React, Redux, Express, Django, Git, Figma
- **Concepts:** Full-Stack Development, RESTful APIs, Generative AI, Authentication

PROJECTS

Shapeshift - Generative AI for Nutrition & Exercise

- Managed a 5-member team as project manager, coordinating tasks, establishing schedules, and ensuring on-time delivery of a full-stack web app using Agile methodologies.
- Designed responsive UI/UX with Figma and built interactive features including dashboard, plan generation, and saved plans using React, TypeScript, and Redux.
- Developed Google authentication with JWT and designed MySQL database schema, integrating with Django APIs to support plan generation, secure user sessions, and personalized data storage.

Twitter Sentiment Analysis & Bitcoin Price Correlation

- Analyzed 10,000+ tweets and historical Bitcoin price data using Pandas and NumPy.
- Cleaned and preprocessed CSV datasets, applied sentiment scoring, and mapped trends using Matplotlib to visualize potential predictive relationships using heatmaps and cross-correlation plots.

RELEVANT EXPERIENCE

University of Tennessee at Chattanooga

Chattanooga, TN

Undergraduate Research Assistant

Sep 2023 – Jan 2025

Eco-Driving for Traffic Simulation

- Collaborated with a PhD researcher to implement their eco-driving algorithm in Python, integrating it with PTV Vissim's API to reduce intersection congestion by up to 45% through dynamic speed and acceleration optimization.

Generative AI Learning Web App

- Co-developed a React/Flask web app leveraging generative AI to deliver personalized quizzes.

The Cheesecake Factory

Chattanooga, TN

Kitchen Support Manager

Jun 2022 – Sep 2024

- Led kitchen operations, trained 10+ staff, and streamlined workflows, sharpening leadership and problem-solving skills under pressure.