

Castle Ford

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EDUCATION

University of Tennessee, Chattanooga

Bachelor of Science in Computer Science: Software Systems

Chattanooga, TN

Dec 2024

- Minor: Entrepreneurship
- Honors: Summa Cum Laude

Southern Adventist University

Pre-Medicine

Collegedale, TN

Jun 2018 - May 2020

TECHNICAL SKILLS

- **Languages:** JavaScript, TypeScript, Python, SQL, HTML, CSS
- **Tools/Frameworks:** React, Express, Flask, Django, Git, RESTful API
- **Concepts:** Agile Methodologies, UI/UX Design, Full-Stack Development

PROJECTS

ShapeShift (Evolved from CPSC 4910 Project)

Technologies: React, Django, MySQL, OpenAI, Redux

- Independently designed, developed, and deployed a full-stack web application, demonstrating end-to-end project ownership.
- Enhanced security and user experience by integrating Google authentication and JWT for seamless, secure sign-ins.
- Implemented Redux for efficient global state management, improving UI responsiveness and maintainability.
- Redesigned the interface based on user feedback, resulting in higher engagement and usability.
- Optimized backend architecture, refining prompting schemes and utility functions to boost performance.

CPSC 4910 Project - Generative AI for Nutrition & Exercise

Technologies: React, Flask, MySQL, OpenAI

- Led as product manager and lead developer, overseeing the design and development of a web app that uses generative AI to create personalized nutrition and exercise plans tailored to user goals.

CPSC 4180 Project - Twitter Sentiment Analysis & Bitcoin Price Correlation

Technologies: Python, Matplotlib, Pandas, NLP

- Analyzed correlations between Twitter sentiment and Bitcoin price fluctuations during volatile market periods.
- Utilized NLP for sentiment classification and Python libraries for data analysis, visualization, and actionable insights into cryptocurrency trends.

RESEARCH EXPERIENCE

University of Tennessee, Chattanooga

Undergraduate Research Assistant, Advisor: Dr. Pengyuan Sun

An Eco-driving Algorithm with Two-Staged Advisory Speed Limits

Chattanooga, TN

Sep 2024 - Jan 2025

- Developed eco-driving algorithms in Python to optimize traffic flow and energy efficiency.
- Tested algorithms in traffic simulation software, improving traffic efficiency metrics in simulated environments.
- Contributed to sustainable transportation research by enhancing energy-efficient driving strategies.

Undergraduate Research Assistant, Advisor: Dr. Mengjun Xie

Sep 2023 - Feb 2024

AI-Driven Study Tool for Enhanced Learning Techniques

- Researched effective study techniques to inform the design of an AI-driven study tool.
- Designed wireframes and system architecture for a web application aimed at improving learning outcomes.
- Built the application using React (frontend) and Flask (backend).

WORK EXPERIENCE

The Cheesecake Factory

Chattanooga, TN

Kitchen Support Manager | Line Cook

Jun 2022 - Sep 2024

- Managed daily kitchen operations, ensuring workflow efficiency and maintaining high food quality standards.
- Prepared high-quality dishes as a Sauté Cook and trained new kitchen staff.

FedEx Ground

Ooltewah, TN

Delivery Driver

Sep 2021 - Jun 2022

- Optimized delivery routes for efficiency and ensured timely, accurate package deliveries.

Redwood Personal Training

Eugene, OR

Personal Trainer

Feb 2021 - Aug 2021

- Managed 38 active clients, creating customized fitness plans and educating them on fitness principles.

9Round Fitness

Bend, OR

Kickboxing Instructor

May 2020 - Dec 2020

- Led small-group kickboxing classes and supported membership and gear sales.

McKee Library

Collegedale, TN

Periodicals Desk Associate

Apr 2018 - Dec 2019

- Managed periodical displays, digitized archival materials, and handled phone inquiries.

EXTRACURRICULARS AND LEADERSHIP

Entrepreneurship Club

Chattanooga, TN

Member

Feb 2024 - Dec 2024

- Engaged in discussions and activities focused on entrepreneurial thinking and business innovation.

Allied Health Club

Collegedale, TN

Vice President

Aug 2019 - May 2020

- Organized events for Allied Health students, fostering networking and professional growth.

Secretary

Jan 2019 - May 2019

- Maintained meeting minutes and communicated club activities to members.

Tri-Community Fire Department

Ooltewah, TN

Volunteer Firefighter

Nov 2018 - May 2020

- Responded to emergencies, including fires, medical crises, and traffic collisions, collaborating with a team to protect the community.