# **Justine Tran**

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EDUCATION

#### University of Houston

Houston, TX

Bachelor of Science in Computer Science, Concentration in Software Design, Dean's List Real-Time Systems Laboratory, Department of Computer Science

December 2023

Relevant Courses: Software Design, Object-Oriented Programming, Algorithms & Data Structures, Operating Systems, Computer Architecture, Real-Time Processing and Embedded Programming, Database Systems, Computer Networks.

#### EXPERIENCE

#### Full Stack Developer Intern

May 2024 – Jan. 2025

Christian Brothers Automotive | JavaScript, React, Node.js, Python, Flask, MySQL, Azure DevOps

Houston, TX

- Reduced payroll processing time by 30% by designing and implementing a Payroll Import feature, optimizing SQL queries, and leveraging React-Redux with RESTful APIs for seamless CI/CD integration.
- Increased operational efficiency by 20% by designing a QuickBooks Update Report to manage RO# workflows (approval, rejection, deletion) using React, Python, and SQL.
- Automated 90% of manual newsletter tasks by developing a Python web scraper to collect and curate franchising news, ensuring consistent content updates.
- Enhanced secure communication by 25% by improving DBG Service through email verification banners and enhanced data security measures, leading to increased user engagement and system integrity.
- Improved customer transparency and satisfaction by developing a vehicle tracking system, enabling real-time service progress updates, using Mantine React for a seamless UI/UX experience.

## Web Developer

Dec. 2023 – May 2023

Killeen Vietnamese Community | JavaScript, React, AWS Service

Remote

• Enabled non-technical admins to manage content independently Developed a custom CMS for a dynamic, scalable website, allowing easy updates of photos, text, events, audio, and PDFs

#### Projects

Cold Call Bot | JavaScript, React, Node.js, Express.js, MongoDB

Feb. 2025 – Present

- Designed and developed an AI-powered Cold Call Bot capable of conducting, analyzing, and learning from cold calls.
- Implemented Natural Language Processing (NLP) and Named Entity Recognition (NER) to extract key insights from conversations.
- Integrated Sentiment Analysis to assess customer reactions and adjust responses accordingly.

#### Project Management System | JavaScript, ASP.NET C#, CSS, SQL

Jan. 2023 – May 2023

• Designed & developed a web-based project management application enabling users to manage projects, assign tasks, allocate team members, and track project progress.

# Fuel Rate Prediction Software Application | JavaScript, React, Firebase

Jan. 2023 – May 2023

- Utilized location data, user history, fuel usage, and company profit margin as key factors for predicting fuel rates.
- Implemented both user and client side interfaces to deliver a seamless digital experience, enhancing user satisfaction and improved client engagement.

# Fitstagram | Java, Android Studio, Firebase, XML, Figma

Jan. 2022 – May 2022

• Developed Android app akin to Instagram, enabling users to post, comment, & vote on content for decision making.

#### Research

# Evaluation of Hybrid Branch Prediction for WCET Analysis | SimpleScalar

Jan. 2023 - May 2023

• Enhanced branch prediction accuracy by evaluating dynamic and hybrid global prediction models, achieving up to 32.4% WCET reduction (7.67% on average) using bubble sort as a benchmark.

## Optimizing WCET: ML for better branch prediction | GEM5, Python

June 2023 - Dec. 2023

 Implemented a decision tree-based ML model in GEM5 and Python to refine branch prediction, reducing mispredictions and improving execution time by 0.02s, though with a minor WCET tradeoff.

## TECHNICAL SKILLS

Programming & Development: C, C++, C#, Java, Python, JavaScript, HTML, CSS, Flask, Node.js, Express.js, React, Redux, Mantine, Git/GitHub, Android Studio, Visual Studio, WebStorm, PyCharm, DataGrip, Figma

Databases & Cloud: SQL (MS, MySQL, NoSQL), MongoDB, SQL Server, Microsoft Azure, AWS Services, Firebase (Auth, Firestore), Linux

Machine Learning & AI: Natural Language Processing (NLP), Named Entity Recognition (NER), Sentiment Analysis APIs & Networking: RESTful APIs, WebSockets, HTTP

## CERTIFICATIONS

 ${\bf Microsoft~Certified:~Azure~Fundamentals} - {\bf Issued~January~2025}$