# Justine Tran

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## Education

**University of Houston** **December 2023**

***Bachelor of Science in Computer Science**, Concentration in Software Design, Dean's List*

**Research with Real-Time Systems Laboratory, Department of Computer Science**

**Relevant Courses:** Software Design, Object-oriented Programming, Algorithms & Data Structures, Operating Systems, Computer Architecture, Real-time Processing and Embedded Programming, Database Systems, Computer Networks

**Languages and Tools:** C/C++, C#, Python (Flask),Java, HTML, CSS, JavaScript (React, Redux, Mantine), Node.js, RESTful APIs, SQL (MS, MySQL), Git/Github, Android Studio, VS, Figma, Azure (DevOps, Firebase), Webstorm, PyCharm, DataGrip

**Certifications:** Microsoft Certified: Azure Fundamentals

## Experience

**Full Stack Developer Intern** | *Christian Brother Automotive* | *JS, React, Node.js, SQL* May 2024 – January 2025

- Designed and implemented a Payroll Import feature, optimizing SQL queries and leveraging RESTful APIs with React-Redux, achieving a 30% reduction in processing time and ensuring seamless CI/CD pipeline integration.
- Designed QuickBooks Update Report to manage RO# workflows (approval, rejection, deletion) using React, Python, and SQL, increasing operational efficiency by 20%.
- Developed an automated Python scraper to gather and curate franchising news, automating the newsletter generation process and reducing manual effort by 90%. Applied test-driven development (TDD) methodologies to ensure high-quality and maintainable code.
- Enhanced DBG Service, including email verification banners, increasing user engagement and secure communication by 25%.
- Created a vehicle tracking system to provide real-time service progress updates, enhancing customer satisfaction and transparency. Leveraged Mantine React to design responsive and visually consistent front-end components, ensuring uniformity and a seamless user experience across the website.

**Web Developer** | *Killeen Vietnamese Community* | *JavaScript, React, AWS* December 2023 – May 2024

- Developed a dynamic, scalable website using JavaScript, React, and AWS, including a custom CMS that enables non-technical admins to independently manage and update content (photos, text, events, audio, PDFs) without coding.

## Projects

**Project Management System** | *JavaScript, ASP.NET, C#, CSS, SQL* January 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* January 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* January 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* January 2023 – May 2023

- Improved branch prediction accuracy and reduced WCET by comparing dynamic and hybrid global branch prediction with bubble sort.
- Achieved up to 32.4% WCET reduction, with an average improvement of 7.67%.

**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 enhance dynamic branch prediction.
- Reduced mispredictions and sped up execution by 0.02 seconds, although WCET increased slightly.