## **HAADI RAZZAK**

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#### **EDUCATION**

# University of Southern California Bachelor of Computer Science

May 2021-December 2024

Relevant Coursework: Data Structures, Introduction to Algorithms and the Theory of Computing, Introduction to Computer Systems, Principles of Software Development, Linear Algebra and Differential Equations, Multivariable Calculus

## **EXPERIENCE**

## **PayPal**

May 2022-August 2022 & May 2023-August 2023

## Software Integration Engineering Intern, San Jose, California

- Developed a system that enables seamless payment integrations for high profiled merchants serving 100+ million users, using Braintree SDK for node.js integration
- Rendered valuable assistance to over 20 merchants in effectively debugging checkout and customization errors, ensuring a
  consistently smooth and user-friendly payment experience
- Enhanced the SDK's functionality, resulting in improved documentation by 10%, allowing for a more robust integration process
- Implemented a comprehensive checkout system utilizing BrainTree and PayPal, enabling merchants to fine-tune their website's checkout experience with all available customization options

Innowi August 2021-December 2021

#### Hardware and Software Intern, Santa Clara, California

- Deployed 15 hardware & software solutions including payments modules, menus, online and mobile setup for local restaurants
- Enhanced kiosk functionality through Java programming and Creo Parametric for customized interactive user experiences
- Actively engaged with hundreds of local customers providing in-person technical support, and collaborated closely with overseas and San Jose development teams on Linux environments for efficient bug reproduction and rapid resolution

## **PROJECTS**

Trojan Planner December 2023

- Crafted a dynamic web application leveraging Flask for backend processes, BeautifulSoup for HTML data extraction, JavaScript
  for DOM manipulation, and a robust algorithm to generate optimal student schedules, tailored to individual preferences
- The scheduling platform has seen extensive use by a diverse student body, with subsequent feedback revealing that 75% of users report satisfaction with the custom algorithm's ability to produce tailored schedules.

## AVL Tree Implementation and Optimization in C++

November 2022

- Designed and implemented an AVL tree data structure, ensuring optimal balance and efficiency in operations such as insertion and removal; significantly reduced operation times, achieving a superior level of performance
- Integrating self-balancing algorithms and advanced rotation techniques, ensuring logarithmic operation times and maintaining tree balance for efficient data handling

#### **Smart Dual-Sensor Thermostat System**

November 2023

- Implemented a dual-sensor thermometer with Arduino, featuring LCD display, servo motor dial, adjustable temperature threshold, audio-visual alerts, and RS-232 serial communication for local and remote temperature monitoring and interaction
- Utilized embedded systems principles, including digital signal processing, PWM control for servo motors, and EEPROM data storage for robust temperature monitoring and user interface design

NBA MVP Predictor March 2023

- Developed a Machine Learning project using Pytorch to predict future NBA MVP using website scraping to extract data from the NBA website, spanning a historical dataset of up to 60 years
- Trained and improved a model and employed RandomForestRegressor to significantly enhance prediction accuracy by 25%

## **TroyLabs - Startup Accelerator**

January 2024

- Selected from over 400 applicants to join an elite cohort of 24 students, partnered w/ Google, AWS, Robinhood, and Tinder.
- Contributed to Hatchet (hyperlinked), which provides critical support to firefighters through an app and hardware solution
- Aided in the technological migration from Unity to Android platforms and leveraging C++ for enhanced functionality

#### **TECHNICAL SKILLS**

- Languages: C++, C, Assembly, Linux, Python, Pytorch, Tensorflow, JavaScript, Java, Node.js, Golang, HTML/CSS
- Technical: Google Colab, Microsoft Azure, Github, Visual Studio Code, Eclipse, Data Analysis, User Experience/Interaction