WAI HEI (RAY) NGAN

Software Engineer

CONTACT

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EDUCATION

Bachelor of Science in Computer Science (GPA: 3.9)

University of California, Davis
Davis, CA | Sep 2018 - Jun 2022

▪ Relative Coursework: Data Structures, Algorithm Design, Object-Oriented Programming, Machine Learning, Artificial Intelligence, Web Programming, iOS Fundamentals, Technology Management, Information Technology Management

SKILLS

C++, Python, Java, HTML5, CSS3, JavaScript, React, C, Git, Linux, SQL, MySQL, API, Node.js, AJAX, REST, Swift, Assembly, R, MATLAB, NumPy, Pandas, UIKit, MongoDB

EXPERIENCE

UNDERGRADUATE CS RESEARCHER

UC DAVIS | DAVIS, CA | AUG 2020 - PRESENT

Study the impact of **obfuscations** on existing **browser fingerprinting** detection techniques as a measure of **web security** supervised by Professor Zubair Shafiq.
▪ Analyzed **top 1 million sites** using web privacy measurement framework and web crawling obfuscation techniques.
▪ Investigated and developed **obfuscation-resistant fingerprinting detection approaches** using machine learning techniques.
▪ Analyzed tracking scripts and network requests from **5000+ domains**.
▪ Wrote and engineered the **research pipeline** that automates **JavaScript** collection, **obfuscations** process, and **fingerprinting** scripts detection.
▪ Presented research findings at **Ad Blocker Developer Summit** 2021.
▪ Leveraged knowledge in **Git, Python, Firefox Dev Tools, Selenium, SQLite, JavaScript, mitmproxy**.

SOFTWARE DEVELOPER

BIT PROJECT | DAVIS, CA | OCT 2019 - FEB 2020

▪ Designed **20+** programming workshops for STEM-teaching open source.
▪ Created web applications using **MongoDB, Express, NodeJS, and React.**
▪ **Led a team of 6** to document and test **30+ API endpoints** on Postman.
▪ Leveraged knowledge in **full-stack development, teamwork, public speaking, and leadership**.

PROJECTS

POPMATCH (GitHub, Website)

An **iOS application** that allows users to have one-on-one video meetings with people of similar interests.
▪ Integrated **real-time video chatting** component using **Twilio Video API**.
▪ Developed **user matching algorithms** with **Firebase** Realtime Database.
▪ Utilized **UIKit, Swift, Objective-C, Firebase, Cloud Storage, Twilio API, Git**.

AI Learning to Play Pong by Atari (Github, Website)

Optimized Atari Pong AI with **deep learning** and **reinforcement learning techniques**.
▪ Trained **Deep Q Learning model** using **Deep Learning VM** Image and **TensorFlow** framework on **Google Cloud** Platform.
▪ Improved AI Agent by **93%** after **2 million training frames**.
▪ Utilized **Python, TensorFlow, Keras, NumPy, OpenAI, Google Cloud Platform**.

Safe Space (GitHub, Website)

A **web application** that rates COVID-19 safety of different stores and restaurants.
▪ Implemented front-end development along with **Google Maps SDK**.
▪ Awarded **second place** out of **100+ teams** for StudentsBuild4COVID19 Hackathon.
▪ Utilized **HTML/CSS, JavaScript, Python, Flask, AJAX, Pandas, Git.**