Ray Ngan

Software Engineer

CONTACT

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EDUCATION

Bachelor of Science Computer Science (GPA: 3.86)

University of California, Davis

Davis, CA | Sep 2018 - Jun 2022

- Relative Coursework: Data Structures, Algorithm Design, Operating Systems, Object-Oriented Programming, Computer Security, Machine Learning, Artificial Intelligence, Web Programming, iOS Fundamentals

SKILLS

(Proficient): C, C++, Python, HTML/ CSS, JavaScript, Git, Linux/Unix, Shell

(Familiar): ReactJS, API, SQL, MySQL, iOS/Swift, Assembly, R

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 various obfuscation techniques.
- Investigated and developed state-of-the-art **obfuscation-resistant fingerprinting detection** approaches using **machine learning** techniques.
- Crawled and scraped tracking JavaScript from **5000+ domains**.
- Designed and engineered **testbed** that automates JavaScript collection, obfuscation process, fingerprinting scripts detection, and result evaluation.
- 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 courses.
- Created **web applications** using **MongoDB, Express, NodeJS, and React.**
- Leveraged knowledge in **full-stack development, teamwork, public speaking, leadership.**

PROJECT

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)

An Atari Pong **AI** optimized with **deep learning** and **reinforcement learning**.

- 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 COVIS-19 safety of different stores and restaurants.

- Implemented **full-stack development** along with **Google Maps SDK.**
- Awarded second place out of 100+ teams for StudnetsBuild4COVID19.
- Utilized **HTML, CSS, JavaScript, Python, Flask, AJAX, Pandas, Git.**