

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, Object-Oriented Programming, Machine Learning, Artificial Intelligence, Web Programming, iOS Fundamentals, Technology Management, Information Technology Management

SKILLS

C++, Python, Java, HTML5, CSS3, JavaScript, React, Git, Unix, Linux, SQL, MySQL, C, API, Node.js, AJAX, REST, Swift, Assembly, R, MATLAB, NumPy, Pandas, 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 various obfuscation techniques.
- Investigated and developed **obfuscation-resistant fingerprinting detection** approaches using machine learning techniques.
- Analyzed tracking scripts and network requests from **5000+ domains**.
- Engineered **research pipeline** that automates JavaScript collection, obfuscation process, fingerprinting scripts detection, and result analysis.
- 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 **Firestore 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 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 StudnetsBuild4COVID19.
- Utilized **HTML, CSS, JavaScript, Python, Flask, AJAX, Pandas, Git**.