

# Andrew Tian

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## SKILLS

- **Software Engineering:** Data Science, Algorithm Design, Quantitative Analysis, Data Mining/Cleansing/Modeling, Full stack Development (Frontend & Backend), Web Applications, Software Design & Development, Coding, Data Structures
- **Leadership:** Strategic Planning & Execution, Project Management, Prioritization, Process Improvement, Collaboration
- **Software:** C++, Java, Android Studio, JavaScript, HTML, CSS, PHP, Firebase, MongoDB, React Native, Node.js, FastAPI, AWS Lambda, GraphQL, Python, AWS Amplify, Axios, BeautifulSoup, NLTK, Docker
- **Languages:** English, Indonesian

## EDUCATION & CERTIFICATIONS

- **Bachelor of Science in Computer Science - University of California, Irvine** June 2022
- **Associate of Science in Computer Science - Diablo Valley College** 2018-2020

## RELEVANT EXPERIENCE

### Data Scientist Intern, Astra International

Summer 2019

- Built object detection models and algorithms for face detection, vehicle detection, and pedestrian counting.
- Developed a model of a convolutional neural network using **Keras** and **TensorFlow** frameworks.
- Enabled on-device, real-time recognition to improve the safety of vehicle operations for self-driving cars.
- Partnered with the project manager to present and promote Astra's new entrance door that used an Object Identification camera to the automotive industry at workshops and exhibitions.

### Mobile Developer Intern, Traveloka

Fall 2020

- Used **ExpressJS** to develop a REST API responsible for user authentication and CRUD operations to a **MongoDB** instance
- Implemented data models, and schema validation using **Mongoose**
- Implemented a responsive front-end with **React** to efficiently reuse UI components

### Software Engineer Intern, NitipDonk

Summer 2021

- Styled, developed, and tested React components in JavaScript
- Customized React Hooks to encapsulate Ajax API calls and designed consistent and reusable JavaScript interfaces which reduced 10% lines of code after refactoring
- Configured AWS Amplify for authentication and hosting, AWS Lambda for development of GraphQL APIs using Python, and MongoDB for permanent storages
- Solved UI's unresponsiveness and CSS animation errors

## PROJECTS

### Anteater Pathway

- Redesigning the search bar, the deletion of academic years, and adjusting the course UI with **JSX, CSS, HTML, and React**
- Integrated the front end with backend API using **Axios** to retrieve data from the database
- Create a web scrapper to retrieve courses and offer history from UCI Catalogue and Webreg schedule of classes
- Create HTTP request using **FastAPI** to get the data from MongoDB database

### Search Engine

- Used **NLTK** and **BeautifulSoup** to parse and tokenize 40,000 files containing **HTML** content to create inverted index
- Implemented sorting of most relevant websites using metrics such as TF-IDF and cosine similarity
- Created interactive user interface using **Python Tkinter** to display top 20 most relevant URLs based on user's query

### Minesweeper AI

- Create a Minesweeper AI using CSP to solve minesweeper easy, medium, and expert boards by implementing backtracking search to find all valid arrangements.
- Create a probability guess algorithm to make a best guess for a tile that have equal probability containing a mine
- Achieve 80% completion for easy (8x8, 10 mines), 50% completion for medium (16x16, 40 mines), and 15% completion for expert (16x30, 99 mines) board

## **COMMUNITY OUTREACH**

### **Notetaker, Diablo Valley College**

**2018 - 2020**

- Helped 2 students with learning disabilities to achieve their academic goals each semester by taking detailed notes for community college Mathematics and Physics lectures.

### **Volunteer, White Pony Express**

**2018 - 2020**

- Partnered with local restaurants and supermarkets to recover, sort, and donate excess fresh food to provide 1,000 meals and pantry necessities to those in need.