# **ANNIE DINH**

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#### **EDUCATION**

#### Bachelor of Science in Computer Science | University of California, Irvine

Exp. June 2021

- Relevant Coursework: Python Programming with Libraries, Programming in C++ Data Structures, Implementation and Analysis, Data Management in SQL
- Hackathon Participation: SB Hacks VI, QWER Hacks, AthenaHacks 2020
- Memberships & Community Service: Women in Computer Science Club (STEM competition engagement),
  Association for Computing Machinery (programming practice), Power of Words and Numbers (math tutoring)

#### **SOFTWARE ENGINEERING PROJECTS**

## Web Search Engine | Information Retrieval Course

May 2020

- Collaborate with team of computer engineers and designers to develop and improve features and functionalities.
- Created intermediate web search engine and crawler to scrape collection of 50,000 websites within ICS domain.
- Hashed and compared content, and eliminated documents with 90%+ similarity to create an informative corpus.
- Hashed and indexed content against query tf-idf score to return most relevant websites to users.
- Optimized search operation by indexing web URLs and stemming queries to achieve query response time <300ms.

### Hand Reader | QWER Hacks

Jan. 2020

- Collaborated with cross-functional team to develop real-time hand signs tracker application to read and display sign language in English to enable signers and English speakers to communicate.
- Implemented machine learning in Python using Tensorflow library to train a model that can read basic hand signs.
- Created training data by dissecting video of hand pose into 200+ pictures, and fed pictures into API that produces and records vectors and data points.

### Bleep Radio | SB Hacks VI

Jan. 2020

- Implemented in Python using Flask for web application framework, Integrated Google text-to-speech API, lyrics retrieval API and profanity library API to remix clean version of desired song.
- Designed web interface with Bootstrap.

### Minecraft Minigames | Personal Project

Dec. 2019

- Utilized Javascript, Python, and APIs to create Minecraft <u>minigames</u>, integrated Minecraft API to build game scenes, and designed game logic using Python to provide interactive game play and feedback.
- Coded game scene around player and chicken spawn, giving player a bow and arrows and updating number of kills in chat and randomly generated sentences.
- Generated game scene maze around the player, triggering a green gem to randomly spawn within this maze, and requiring player to collect <u>5 gems within the time limit</u> to win or otherwise fail in a <u>losing scenario</u>.

#### MapleStory Bot | Personal Project

July 2019

- Utilized pixel tracker function to retrieve character's coordinates and process movement in real-time.
- Test, iterate, and continuously optimize the bot using AutoHotkey.
- Develop and improve features, including disconnect detection, chat and player detection.
- Employed state-design and multi-threading to build multi-functional bot, automating repetitive tasks required to progress in the game, including training, farming, selling items, detecting other users' presence and chat.

# **TECHNICAL SKILLS**