# Alan Lam

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## Education

University of California, San Diego

Bachelor of Science in Math-Computer Science | Minor in Math Education

Dec. 2019 GPA: 3.5

## Skills

Languages: Python, Java, HTML, CSS, JavaScript, MATLAB, C, C++, SQL Tools/Frameworks/Libraries: Git, Android, Linux, Node.js, MongoDB, jQuery, pandas, Flask

# **Projects**

more at <u>aln.netlify.app/projects</u>

#### CS Tracker [Python, Tensorflow] | GitHub

- A script that records game statistics from a player's current League of Legends game
- Created an image classifier using Tensorflow to identify numbers from screenshots
- Used matplotlib to generate plots to visualize a player's performance across different games

#### Summoner-Stats [Python, Flask] | https://summoner-stats.herokuapp.com/ | GitHub

- A web application that allows users to search up League of Legends player info
- · Utilized the Riot Games API to gather information for player profiles and advanced statistics for individual games

#### MOBAFire Web Scraper [Python] | GitHub

- A web scraper that grabs League of Legends champion info from the top 3 guides on MOBAFire
- Designed a simple GUI and implemented automatic web page formatting to make it user-friendly
- Packaged script as a Windows executable to distribute as a portable application
- Utilized multiprocessing to speed up script execution by ~40%

#### Creatests [Node.js, MongoDB] | https://creatests.herokuapp.com/ | GitHub

- A web application that allows users to create collections of flashcards
- · Implemented password-checking functionality for editing flashcard questions and answers

## Experience

#### Computer Science Instructor | ThoughtSTEM | San Diego, CA

Jul. 2019 - Mar. 2020

- Taught ~80 K-5th students in after school programs how to make games in Racket
- Co-led a data science bootcamp of ~30 high school students
- Designed lesson plans to increase student engagement and learning
- Employed language-learning tactics to teach students how to learn programming languages

#### Computer Science Tutor | UC San Diego | San Diego, CA

Jul. 2019 - Sep. 2019

- Tutored for CSE 7, Introduction to Programming with MATLAB and COGS 18, Introduction to Python
- Worked with ~20 students on a weekly basis to guide them through coding labs and assignments
- Improved student understanding of course concepts by creating Jupyter notebooks and PowerPoint presentations for explanations and final exam practice problems

#### Programming Instructor Aide | UC San Diego Extension | San Diego, CA

Jan. 2019 - Sep. 2019

• Assisted high school students with debugging iOS and Android apps

#### Computer Science Mentor | ThoughtSTEM | San Diego, CA

Jun. 2018 - Aug. 2018

- Worked with ~50 middle and high school students on a weekly basis to debug Racket applications
- Collaborated with ~30 developers on Morugamu, a programming language packaged as a board game
- Analyzed Kickstarter data to determine the relationship between money asked for and money received on board games