

# Harrison Ku

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in hmku1

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## education

University of California, San Diego

B.S. Computer Science

4.0 Major GPA, exp. 2020

## skills

**Languages:** Python, Java, C++, C, C#, R, LaTeX, MATLAB, HTML/JS/CSS

**Other:** Flask, Node.js, Apache Kafka, PostgreSQL, Orator ORM, PyTorch, Android Studio, Unix/Linux

## honors

USA(J)MO Qualifier

Top 250 (0.08%) on Olympiad-level mathematics competition out of ~300,000 participants

USACO Gold Division

Top ~600 internationally on algorithm-based programming competition

UCSD Jacobs School Scholarship

Full-ride merit scholarship extended to ~10 students out of ~85,000 applicants each year

## projects

AlphaGomoku Pure Hackathon12

Neural net-based AI that uses MCTS and reinforcement learning to master Gomoku (five-in-a-row).

*Tools/frameworks: Python, PyTorch*

LyricsSearch

Web app that finds matching songs when given song lyrics.

*Tools/frameworks: Flask, HTML/JS/CSS, BeautifulSoup, Google Search API*

MoodBible

HackPoly 2018

Full-stack mobile app that generates customized quotes and song recommendations based on the user's current mood

*Tools/frameworks: Android OS, Android Studio*

## experience

Jane Street

Summer 2019

Incoming Quantitative Trading Intern

Quora

ongoing

Software Engineering Intern, Machine Learning Platform

- Migrating spaCy natural language processing library to in-house model persistence and execution service (MLServe)
- Improving and implementing new features on a number of services, including debug tools, reservation queues, and other widely-used ML services
- Worked with product-side Mechanics team to significantly improve user credential acquisition and quality on Quora through internationalization and feature improvements
- Verified results and generated metrics on credential growth through A/B testing

Pure Storage

Summer 2018

Software Engineering Intern, DevTools

- Created a flexible, full-stack framework for tools that react to pull requests
- Implemented Github's CODEOWNERS service and other development tools for company-wide use on Bitbucket
- Created a service to automatically run Jenkins jobs in response to user-specified keyword commands
- *Tools/frameworks: Flask, Ember.js, Apache Kafka, PostgreSQL, Orator ORM, Jenkins, Bitbucket Server API*

UCSD Jacobs School of Engineering

2018 - ongoing

Tutor/Research Intern, CSE Department

- Tutored for CSE 11 (Object-Oriented Programming in Java) and CSE 30 (Systems Programming) under Prof. Rick Ord; responsibilities included hosting lab hours and grading assignments and exams
- Studying areas related to algorithmic theory and complexity under Prof. Russell Impagliazzo

Art of Problem Solving

2018 - 2019

Grader

- Evaluated/gave feedback on assignments for a variety of online advanced math and CS courses (competition math, object-oriented programming)