Harrison Ku

✉ harrisonmku@gmail.com ⚙ hmku in hmku1 📞 (949) 331-2897 🏠 hmku.github.io

education

University of California, San Diego
B.S. Computer Science, minor in Mathematics
4.0 Major GPA, exp. 2020

skills

Languages: Java, Python, 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

coursework

CSE 30: Systems Programming
CSE 100: Advanced Data Structures
CSE 101: Design and Analysis of Algorithms
CSE 105: Theory of Computability
CSE 158: Recommender Systems and Web Mining (Machine Learning)
CSE 190: Neural Networks
MATH 183: Statistical Methods

experience

Pure Storage   Summer 2018
Software Engineering Intern, DevTools Team
- Creating a flexible, full-stack framework for tools that react to pull requests
- Implementing Github's CODEOWNERS service and other development tools for company-wide use (over ~1000 employees) on Bitbucket
- *Tools/frameworks: Flask, Ember.js, Apache Kafka, PostgreSQL, Orator ORM, Bitbucket Server API*

Art of Problem Solving   ongoing
Grader
- Evaluating/giving feedback on assignments for a variety of online advanced math and CS courses (competition math, object-oriented programming)

UCSD Jacobs School of Engineering   ongoing
Tutor/Research Intern, CSE Department
- Tutoring for CSE 11 (OOP in Java) under Prof. Rick Ord
- Studying areas related to algorithmic theory and complexity under Prof. Russell Impagliazzo

projects

AlphaGomoku   Pure Hackathon12
- Neural net-based AI that uses Monte Carlo tree search 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*

GoogleTranslate-Bot
- Python script that parses over ~1000 Reddit comments per minute for keywords and translates them
- *Tools/Frameworks: Python, Google Translate API, Reddit API*