Harrison Ku

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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, 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 140: Components/Design Techniques for Digital Systems
CSE 158: Recommender Systems and Web Mining (Machine Learning)
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 and giving feedback on assignments for students enrolled in AoPS's STEM-oriented online school
- Grading for multiple advanced math and computer science courses (competition math, object-oriented programming)

UCSD Jacobs School of Engineering   ongoing
Research Intern, CSE Department
- Studying areas related to algorithmic theory and complexity under Prof. Russell Impagliazzo

projects

MoodBible
- Full-stack mobile app that generates customized quotes and song recommendations based on the user's current mood
- *Tools/Frameworks: Android OS, Android Studio*

LyricsSearch
- Web app that finds matching songs when given song lyrics
- *Tools/Frameworks: Flask, HTML/JS/CSS, BeautifulSoup, Google Search API*

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*

24 Solver
- Command-line script that generates solutions for the classic math card game 24
- *Tools/Frameworks: C#, Visual Studio*