# Haaris Khan

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## Education

### University of California, Berkeley: August 2015 - May 2019

Pursuing Bachelors of Arts in Computer Science
Relevant Coursework:

- Efficient Algorithms and Intractable Problems
- Data Structures
- Probability and Random Processes
- Machine Structures
- Discrete Mathematics and Probability Theory
- Machine Learning
- Beyond Worst-Case Analysis: Graduate Level Algorithms
- Introduction to Artificial Intelligence
- Computer Security
- Introduction to Electrical Engineering I, II

## Work Experience

### Naehas: Dynamic Offering and Content Management June 2017 - August 2017

*Software Engineering Intern*

- Developed and designed a management platform for Fortune 50 insurance agencies, financial services, and telecommunications' marketing campaigns via Java backend and Quartz API Job-Scheduler
- Integrated Quartz database with existing MySQL database and wrote queries to efficiently display filtered jobs
- Worked with backend services to request, manage, and post query result sets; stylized with JQuery.

### REVEALiO: Augmented Reality for the Heart June 2016 - August 2016

*Software Engineering Intern*

- Created web applications for iOS purchases via Django; populated and analyzed choices through SQL database
- Optimized speed and analytic performance for the web / app using Google Analytics and SEO techniques

## Projects

### Fight VR! The Virtual Reality Boxing Game HTC Vive, Unity Engine, C #

- Created first-person virtual reality fighting game against AI opponents on the HTC Vive using Unity engine
- Programmed and tested an Arduino microcontroller using Haptic Feedback, activating vibration motors corresponding to impacted areas of a player's body based on damage taken
- Implemented analytic methods such as in-game model interaction, the AI learning and adaption to user attack patterns, and collision detection / trigger handling
- Recognized by US Navy (Space and Naval Warfare Systems Command) as winner of VR Challenge

### BumbleB33: Voice-Controlled Car Arduino, C, Python

- Designed and built a battery-powered car that accelerates, decelerates, and turns via voice commands
- Used K-Means to classify voice signal into one of the four commands in Arduino
- Implemented feedback controls to adjust direction and velocity of the car

### Outside Recs: A Personalized Recommendation Platform Android, Java

- Developed an Android application for attendees of the Bay Area Outside Lands festival that creates optimized scheduled based on user account preferences via Spotify API
- Analyzes users' favorite artists and genres to create personalized schedules for attendees via Uniform Cost Search and other graph-traversal algorithms

## Skills

*Languages:* Python, Java, SQL, C, C#, C++, Haskell, HTML / CSS, Javascript
*Frameworks / Tools:* MySQL, TensorFlow, Numpy, SciPy, Django, Android Studio, Arduino, Raspberry Pi, Unity Engine