Kyle C. Vedder

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Education

University of Massachusetts Amherst

B.S. in Computer Science   2015 - 2019

- GPA: *3.89*
- Relevant Coursework: *CS 403 Intro to Robotics, CS 250 Intro to Computation, CS 220 Programming Methodology*

Skills

- Proficient with: *Java and C++*
- Experience with: *C, Scala, GoogleSQL, HTML, CSS, Javascript, Bash, Python, FORTH, LaTeX, Dart*
- Tools: *git, Mercurial, Perforce, Piper, FlumeJava, Spring Boot/Web/MVC*
- Platforms: *Ubuntu, Debian, and Windows*
- Areas of Experience: *Robotic systems programming and development, Web Service development, Microcontroller programming, Socket programming*

Industry Experience

Google Inc

Software Engineering Intern   Summer 2016

- Worked with AdWords Overview team to deliver to users useful, statistics driven insights about their ad campaigns. Wrote FlumeJava data pipeline to do offline statistical analysis on massive customer datasets as well as developed UI components using Dart and AngularDart to display the data.

Unidesk Corporation

C++ Developer   Summer 2015

- Worked with a team of engineers to successfully design and implement a framework to test proprietary offline Windows registry hive manipulation APIs. Wrote C++ framework to call Win32 APIs to provide setup and validation of registry hives manipulated by Unidesk's registry hive editor.

Unidesk Corporation

Robotics Intern   Summer 2014

- Worked with the CTO and CMO to successfully implement an articulated robot arm for a trade show to be manipulated by attendees through an iPad. Wrote Java backend to implement a JSON based web service to accept highlevel user input, translating the commands into lowerlevel FORTH commands to choreograph robot movements while avoiding collisions.

Academic Experience

AMRL Robotics Lab

Research Assistant   2016 - Present

- Implementing PRM, a motion planning algorithm, for use as a baseline for research comparison as well as use as AMRL's RoboCup SSL motion planner.
- Implementing a simulator of a virtual RoboCup SSL field for use as AMRL's RoboCup SSL simulator. Developing network communication, infrastructure, and physics for multi-robot collisons and ball interaction in a performant manner.

CS 220 Programming Methodologies

Teaching Assistant   2016 - Present

- Working with six other TAs to lead discussion sections, hold office hours, and answer questions on Q&A forum. Worked with instructor to improve projects as well as design and enact structural changes to the discussion sessions to better suit students needs.

Honors & Awards

1st Place AWS, 1st Place Documentation, Overall Finalist
HACKUMASS IV   *2016*
- Developed a working application in thirty six hours that can generate poems from images using a combination of machine learning and genetic programming. Implemented picture classification API calls, classification tag synonym gathering, synonym inflecting, poem generation, poem scoring, and genetic programming system.

3rd Place Finalist
HACKHOLYOKE 2016 HACKATHON   *2016*
- Developed a working application in twenty four hours that can generate a video of Obama saying a user-provided phrase. Implemented a custom MapReduce framework using only the Java standard library and a smart caching system for sliced videos.

Course Citation
CS 187 DATA STRUCTURES AND ALGORITHMS   *2016*
- Received course citation for outstanding performance and ranked in the top three students.

Dean's List
REGISTRAR'S OFFICE   *2015 – Present*
- Attained Dean's List every semester for achieving above a 3.50 semester GPA.

Entrepreneurial Spirit Award
GRINSPOON ENTREPRENEURSHIP INITIATIVE   *2016*
- Received award for demonstrable entrepreneurial spirit in the development of Marvin Gardens.

1st Place AWS, 1st Place Groupon, 2nd Place Overall
HACKHOLYOKE 2015 HACKATHON   *2015*
- Developed a working application in twenty four hours that can provide UMass and Holyoke students personalized daily email digests of allergysafe foods to eat at each campus dining hall. Implemented the RESTful API, Email Generation Logic, Database I/O, and Web Scrapers.

Most Technically Challenging Project Award
BLUEPRINT HACKMIT HACKATHON   *2014*
- Developed a working application in eight hours with a team of three other high school students that provides free internet access via SMS text messages. Implemented an HTTP service backend in Java.