Michael James Murphy

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Education

May 2017 **Carnegie Mellon University**, *Pittsburgh, PA*, QPA: 3.6.
Bachelors of Science in Computer Science, Minor in Music Technology

Selected Coursework: Compiler Design, Machine Learning, Foundations of Programming Languages, Introduction to Computer Music, Probability and Computing, Great Theoretical Ideas in Computer Science, Production Audio, Sound Recording, Solfege, Harmony, Eurythmics

Skills

Languages: Python, OCaml, SML, Java, C, C#, bash, JavaScript, HTML, LaTeX

Libraries: Jane Street Core, ROS, Django, Bootstrap, Qt

Internships

Summer 2015 **Software Engineering Intern**, *WhatsApp*, Mountain View, CA.
- Worked on the Windows Phone team implementing networking protocols and improving reliability

Teaching Experience

Fall 2014 - Spring 2015 **Teaching Assistant**, *15-122 Principles of Imperative Computation*.
- Independently taught weekly recitations on fundamental data structures and algorithms

Fall 2014, Fall 2015 **Teaching Assistant**, *15-131 Great Practical Ideas in Computer Science*.
- Periodically lectured about 90 freshmen on bash, text editors, and other tools for computer scientists

Summer 2014 **Teaching Assistant**, *15-110 Principles of Computing*.
- Prepared and gave a 5-10 minute daily lecture on introductory computer science topics
- Taught daily lab section of about 30 students, and held daily office hours

Summer 2016 **Teaching Assistant**, *15-122 Principles of Imperative Computation*.
- As head TA, coordinated class and other TAs

Teaching Assistant, *15-150 Principles of Functional Programming*.

Spring 2014 - Present **Peer Tutor**, *CMU Academic Development*, Pittsburgh, PA.
- Assisted with homework and explained material from various courses on a weekly basis

Research Projects (CORAL Research Group, Professor Manuela Veloso)

Summer 2013 **Robot UI**.
- Designed and coded a new UI for the CoBot mobile service robots using ROS
- Implemented in a linux touch interface using Python and Qt
- Gained experience working with large foreign code bases and using third party libraries

Summer 2014 **Robot Log Explorer Site**, *data.cobotrobots.com*.
- Implemented a script to parse log data from CoBot mobile service robots into a database
- Designed a website using this database to search logs across many categories including coordinates visited, and to display and graph the results
- Gained experience learning new languages and tools and creating custom algorithms

Projects

Fall 2014 **Adaptive Interval Tutor**, *ait.michaeljamesmurphy.com*.
- Worked with three people to create a web app to train users' ear for musical intervals
- Designed a probabilistic intelligent tutoring system to add adaptive difficulty