

James Mackey

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Education

Cornell University, College of Engineering, May 2017, Ithaca, NY

GPA: 3.42; Major: *Computer Science* (3.51); Dean's List: *Fall 2013, Fall 2015, Spring 2016*

Related Coursework: *OO Programming and Data Structures; Functional Programming; Computer System Organization; OS; Algorithms; AI; Scripting; Linear Algebra; Diff-Eqs; Data Viz; Discrete Structures*

Related Experience

Teaching Assistant - Artificial Intelligence, Cornell University, Ithaca, NY, Fall 2016

- Hold office hours to improve student understanding
- Grade exams and homework

Technology Analyst Intern, Credit Suisse, New York, NY, June 2016 - August 2016

- Designed XML data model & wrote XML DB API for internal health check application
- Designed & Implemented messaging page for Product Control internal dashboard

Software Engineering Intern, Workday, Pleasanton, CA, May 2015-August 2015

I worked on an application to integrate with the automating testing system that:

- Parses XML and .log files with sizes on the order of gigabytes into BSON
- Searches the database for runs by test case id, date, failures, etc.
- Represents a test run in a front-end application using asynchronous lazy loading
- Reduced load time in the browser from up to 20 minutes to less than 1 second

Software Engineering Intern, Cardiopulmonary Corp, Milford, CT, May-August 2014

- Developed mobile application allowing nurses and doctors to (1) view current assignments, (2) change assignments, (3) view alert history, (4) transfer assignments to a co-worker.
- Queried and altered SQL Server database based on user input.
- Planned and implemented the application with guidance from a project manager.

Projects

- **MapReduce:** *Fall 2014, OCaml - Async lib.* - Developed MapReduce structure & associated applications (i.e. map words from docs to file names, find common friends in graph)
- **Honeypot:** *Spring 2015, C* - Multi-core server that accepts & categorizes network packets & tracks statistics related to their arrival
- **3D Tic-Tac-Toe Bot:** *Fall 2015, Python* - Implemented bot based on minimax algorithm that learned from sampling.
- **Email Inbox:** *Fall 2015, Python* - Concurrent implementation where main thread passes off incoming SMTP connections to thread pool to process. Emails stored in text docs

Other Work Experience

Student Employee: Cornell United Religious Works, *September 2015 - Present*

Bartender: Bar 80, *June 2014 - April 2015*

Circulation Assistant: Cornell University Library, *September 2014 - May 2015*

Leadership

Leader, Fall 2016, Cayuga's Waiters

Musical Director, Fall 2015 & Spring 2016, Cayuga's Waiters

Class President, Grades 11-12, Guilford High School

Captain, Grade 12, Guilford High School Varsity Hockey

President, Grade 12, Guilford High School Voices (A Cappella group)

Language Skills

Advanced: *Java, Python, JavaScript, C#, OCaml*

Proficient: *C, SQL, Bash, PHP, HTML, CSS*

Familiar : *R, Matlab, Mongo QL, Objective-C*