# Ashwin Sekar


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GPA: 3.74/4.0


## Education

2014 – 2018 **Bachelors in Computer Science**
**Minor in Robotics and Engineering Studies**
*Carnegie Mellon University*

## Work Experience

Aug 2016 – Dec 2017

Teaching Assistant
**15-210 Parallel and Sequential Data Structures and Algorithms**

May 2017 – Aug 2017

Software Engineering Intern
**Two Sigma**

- Created a framework to forward large orders to different execution algorithms based on custom classifiers.
- Performed data analysis on trading simulations to create and deploy a multi class SVM classifier that outperformed current production algorithm in total slippage.
- Written in Java, Groovy and Python.

May 2016 – Aug 2016

Software Engineering Intern
**Google**

- Created a data service for internal ads email service to rollup feedback and user data.
- Created an api server for a data visualization frontend to query this data.
- Written in Java and SQL. Fully deployed and scaled in production.

May 2015 – Aug 2015

Software Development Intern
**Financial Industry Regulatory Authority**

- Created a service that analyzes market data and generates violations for the SEC Limit Order Display rule.
- Written in Scala with the Spark framework. Deployed on Amazon EMR cluster.

## Awards

2012 **DoD Digital Forensics Challenge (Dc3)**
*International high school team winner 2012*
2014-2015 **Deans List**
*Fall 2014, Spring 2015, Fall 2015, Spring 2016*

## Personal Projects

Flow on the Go
*Dense optical flow on mobile GPU*

- Implemented and parallelized a Dense inverse search based algorithm to achieve 25fps on a mobile gpu, and 50fps on desktop gpu for 4K resolution

C0 Compiler
*Subset of C compiler written in Haskell*

- Wrote a compiler for C0, a subset of the C programming language
- Implemented multiple optimization including SSA translation, constant propagation, folding, strength reduction, dead code removal, function in lining, loop unrolling, loop hoisting.

March Madness 2015 bracket solver
*Written in R and Azure ML*

- Implemented a boosted decision tree, support vector machine and Google's pagerank algorithm in R and Microsoft Azure ML to predict the 2015 march madness bracket.
- Successfully predicted the final four.

3D printed Robotic Arm
*Arduino powered robotic arm*

- Created a 3D printed Robotic Arm, actuated through fishing line and servos.
- Wrote a Node.js interface to control the arm through a Leap Motion infrared controller.

## Technical Skills

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|---|---|
| Proficient in | Java, C, PHP, SML, HTML, JavaScript, SQL, LaTeX, Linux Git, Mercurial, Scala, Spark Ember.js, Node.js |
| Familiar with | C++, python, R, Azure ML Assembly |