

# Rahul Nath

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## EDUCATION

### Georgia Tech

M.S. IN COMPUTER SCIENCE  
Candidate, Part-Time | [OMSCS](#)  
Specialization in Machine Learning

### Williams College

B.S. IN COMPUTER SCIENCE  
B.A. IN ECONOMICS  
June 2015 | Williamstown, MA  
Dean's List, Class of 1960 Economics Scholar

### GCHS, Valedictorian

June 2011 | Glen Cove, New York

### Relevant Coursework

High Performance Parallel Algorithms  
Intro To Information Security  
Machine Learning for Trading  
Data Structures & Algorithms (Also T.A'd)  
Operating Systems

## SKILLS

### Programming

Primary Languages (1000+ lines):  
Python • C • Java

### Familiarity with:

SQL • Javascript • Lisp • x86 Assembly

### Experience with:

Unix/Linux • Git/SVN • HTML/CSS  
Google App Engine • Jinja2 • AWS EC2  
Flask • Bootstrap • BeautifulSoup

### Significant Exposure to:

PostgreSQL • AWS Redshift • Apache  
Nginx • Solr • Jetty • Tomcat

### APIs and Tools

Slack API • Twilio API • YouTube API •  
Pandora Bots API • Vagrant • Chartio •  
Optimizely A/B • Docker • Pandas •  
Numpy • Sklearn

### Spoken Languages

Spanish (Intermediate Proficiency)  
French (Beginner Proficiency)  
Bengali (Intermediate Proficiency)

## OPEN-SOURCE

- [CKAN: Open Source DMS](#)

## EXPERIENCE

### Udacity | COURSE MANAGER AND SOFTWARE DEVELOPER

Aug 2015 – July 2016 | Mountain View, CA

- Re-invented Intro to Programming Nanodegree (IPND) into exploratory program to other courses, increasing its enrollment by over 20% – the fastest growing nanodegree at Udacity.
- Created webcast teaching sessions and authored lessons on virtualization and Python optimization constructs.
- QA'd and created content for Machine Learning, DevOps & Android Basics.

### Naval Research Laboratory | CONTRACTOR

July 2014 – Sept 2014 | National Harbor, MD

- Implemented a tool in Python for A.I. robot to learn actions in polynomial time – a previously intractable problem – making it feasible to automate the process of environment knowledge acquisition.
- Designed and implemented an algorithm in Lisp and Python to reduce prepositional and word-sense ambiguity in interpreted speech using contextual information.

### Mobiquity | ANDROID DEVELOPER INTERN

May 2014 – July 2014 | Wellesley, MA

- Implemented communication and data collection between an EC2 server and an Android application for Mobiquity's deltaQ platform.
- Created the UX, UI, and business logic for an indoor navigation application using Node.js, iBeacons, Google Glass, and AWS EC2, S3, Kinesis, and Cognito.

## PROJECTS

### [Rentbot](#)

- Helped create a chatbot designed to help San Francisco residents learn their rights as renters. Utilized Flask, Google App Engine, and Pandorabots API.

### TA Sessions

- I conceptualized and developed Udacity's first student-to-student Q&A video platform – a full-stack project with integrated Slack orientation bot for over 2000 students. Leveraged Google App Engine, DataStore, and Ruby on Rails.

### YouTube Data Pull

- Automated student YouTube data collection for Udacity webcasts. I wrote a Python cron job that collected over 8 million data points, formatted and stored the data on Udacity's AWS RedShift server, and pipelined it into Chartio.

### [PrePost2](#)

- Using selenium, multiprocessing pools, and BeautifulSoup, I created a webscraper to collect documents and suggest 25% more accurate environment domain models to be used by an artificially intelligent agent planning its actions.

### [Medicost](#) (MIT Hack Medicine Team, 24-hr hackathon)

- Created a website to easily search cost requests and receipts made by doctors, standardizing expensive medical procedure costs for over 44 million Americans without medical insurance. We used Flask, Grunt, JQuery, and Bootstrap.

### [Virtual Assembly Language Emulation](#)

- I wrote a virtual emulator for a RISC assembly language using a CISC set. I found a trade-off of 26 CISC instructions for every RISC instruction.