



# Chase Roberts

Computer Science • Mathematics

## Contact

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## Coding Languages

Python

C++

C

Javascript

C#

Java

CUDA + MPI

Hadoop + Spark

## Honors

**UPE CS Honor Society**

President Spring 2016

**Deans List**

2014 - 2016

**Delta Phi**

Highest GPA Fall 2015

## Competitions

**Northsec**

Second Place 2016

**Microsoft BTS**

Second Place 2015

**HackRPI**

Prize Winner 2014

## Relevant Courses

Machine Learning

Graduate Algorithms

Parallel Programming

Binary Exploitation

Statistics

Data Structures

Math Analysis

Quantum Physics

## Foreign Languages

German - Intermediate

Spanish - Elementary

## Hobbies

Rock Climbing

Photography

Film making

## Github

[github.com/Thenerdstation](https://github.com/Thenerdstation)

## Website

[Thenerdstation.github.io](https://Thenerdstation.github.io)

## Current Education

**Rensselaer Polytechnic Institute** - Class of 2018

- GPA: 3.86 Major GPA: **3.91**
- Recipient of the 2024 Lally Bicentennial Award
- Enrolled in the School of Science working towards a Bachelor Degree in Computer Science and Mathematics
- Expected graduation May 2018

## Software Internships

**Bloomberg L.P.** - New York City, NY

June 2016 - Present

- Working on performance analytics and data quality control system
- Both systems run on distributed Spark clusters
- Created system that did statistical anomaly detection on gigabytes of performance data a day. Caught 4 unique errors within 2 weeks
- Used data to classify fields into different clusters. Classifications are now being used throughout Bloomberg for server load balancing
- Designed genetic algorithm for our data quality control system. Could create a regex when given a list of strings to match and mismatch
- Also implemented a character level recurrent neural network that could classify a string input as good or corrupted

**Intentional Software** - Seattle, WA

May 2015 - August 2015

- Member of the graphics team
- Worked on shader meta program implementation
- Decreased shader build time from 20 minutes to a 30 seconds with dynamic compilation
- Also added features to the 2D Geometry API, focusing on efficient elliptical and Bezier curves rendering

## Undergraduate Research

**SCOREC - Supercomputing Research**

September 2015 - December 2015

- Created experimental automatic differentiation C++ data type
- Data type can take arbitrary derivatives of functions without any major refactoring of existing code
- Arbitrary derivatives were created by doing recursive type templating
- The code is open-sourced and can be seen on SCOREC's github

## Extra Curricular

**UPE Computer Science Honor Society**

Inducted Fall 2015

- **Elected President Spring 2016 - Present**
- Society organizes several events throughout the year, including several tech talks, programing competitions, tutoring sessions, and interview prep
- Raised \$2,300 and wrote several problems for our biannual programming competition

## RPISEC

Member since Spring 2015

- RPISEC is a highly successful security club at RPI
- Consistently win or place highly in dozens of CTF across the continent
- We invest heavily in teaching new members security skills by teaching classes and giving weekly talks
- Currently creating our first worldwide CTF