

# Hector Antonio Cardenas

hcardenas.com • github.com/tonocm • (585) 360 9644 • hector.cardenas@rochester.edu

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## Skills

- **Programming Languages:** Java, Python, C, C++, JavaScript, OCaml, Scheme, Ruby, and Prolog.
- **Programming Tools:** Git, Bash, SaltStack, MongoDB, IntelliJ, Emacs, MS Azure.
- Conducted research on Parallel Computing, Configuration Management, and Cache Locality.
- Lead Data Structures and Algorithms workshop, exercising collaborative learning and group discussion skills.

## Education

UNIVERSITY OF ROCHESTER

ROCHESTER, NY

**Bachelor of Science in Computer Science and Bachelor of Arts in Economics**

**May 2017**

- Leadership involvement: Class of 2017 President and Resident Advisor.
- Academic involvement: RocHack Mentor, Computer Science Undergraduate Council Vice President.
- Other involvement: Catholic Newman Community, Alpha Delta Phi Fraternity and Literary Society.

## Work & Research Experience

GOOGLE

NEW YORK, NY

**Software Engineer**

**July 2017 – Present**

- Designing and engineering privacy and security systems written in C++ with the purpose of safeguarding Google's user data with the highest standards.

GOOGLE

MOUNTAIN VIEW, CA

**Software Engineering Intern**

**May 2016 – August 2016**

- Wrote and deployed a replicated, highly available, and highly scalable Java server to assist in content acquisition for Google's business high value partner relationships, allowing for fetching and parsing HTML content into objects consumable by a larger data handling system.
- Replaced existing system with high engineering support costs, for a more affordable and maintainable one, with zero downtime by using dual write techniques.
- Developed POSIX file system interface on top of Amazon S3 remote connections to communicate with Google Cloud Storage, enabling users to integrate with our services without needing to migrate storage platforms.

GOLDMAN SACHS

NEW YORK, NY

**Summer Analyst – Cloud Platforms**

**May 2015 – August 2015**

- Developed configuration management software modules, written in Python, allowing for a transition to open-source technologies at the firm; aiming to bridge the gap between open-source and existing proprietary software in production. Efforts to publish back to the open source community in progress.
- Redesigned and restructured SRDF backed hosts' failover tool, used for fast and automated server and storage rerouting. Standardized API data transaction across different technology teams, allowing for seamless future development.

UNIVERSITY OF ROCHESTER

ROCHESTER, NY

**Artificial Intelligence Teaching Assistant**

**January 2016 – May 2016**

- Taught topics on Heuristic Search, Constraint Satisfaction and Logic, Uncertainty, and Machine Learning.

**Newman Community Web Developer and IT Manager**

**January 2014 – January 2015**

- Developed web application using Node.js, MSSQL, client-side JavaScript with AJAX calls, and REST APIs.

## Personal Projects

**A Refutation of the Clique-Based P=NP Proofs of LaPlante et al** ([arxiv.org/abs/1504.06890](http://arxiv.org/abs/1504.06890))

**April 2015**

- Disproved by counterexample that the algorithms presented are flawed and cannot guarantee that  $P = NP$ .