

# JOE LEDGER

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## EDUCATION

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### Case Western Reserve University (CWRU)

Cleveland, OH

M.S. in Computer Science

*Expected Graduation: Spring 2018*

Graduate GPA: 4.0

B.S. in Computer Science

*Expected Graduation: Spring 2017*

Minor: Applied Data Science

Undergraduate GPA: 3.56

**Bronx High School of Science**

*Graduated: Spring 2013*

## WORK EXPERIENCE

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### CWRU Department of Computer Science

Summers: 2015, 2016

*Undergraduate Researcher*

*Cleveland, OH*

- Summer 2016: Worked on Indexed Personalized Page Rank
  - Accelerated Personalized Page Rank computations by using precomputed proximity vectors.
  - Results are promising: 50-100% speed increases for selected parameter settings.
  - Publication in draft stage.
- Summer 2015: Worked on the Cell Line Classification Project
  - Used machine learning algorithms (Support Vector Machines and Decision Trees) to classify cell lines by their reaction to the cancer drug SMAPs using gene expression and IC50 data.
  - Presented results at the 2015 CWRU Data Science Symposium and 2016 Research ShowCase.

### CWRU Office of Sustainability

Spring 2016 (Part Time)

*Green Lab Auditor*

*Cleveland, OH*

- Developed a desktop application that creates customizable visualizations from energy sensor data.
- Application is used by lab auditors who write reports on how behavior changes could save energy.

### BldgScout

Summer 2016 (Part Time)

*Backend Development Intern*

*Cleveland, OH*

- Fixed security issue with existing UnVolt Engine involving the processing of user passwords.
- Prototyped new version of UnVolt Engine using Java Spring Boot.
- Designed and implemented scalability and correctness tests for all API endpoints.

## RELEVANT COURSEWORK

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**Data Mining**

**High Performance Scientific Computing**

**Machine Learning**

**Software Engineering**

**Database Systems**

Computer Networks

Algorithms

Software Craftsmanship

\*Courses in **bold** were taken at the graduate level.

## TECHNICAL SKILLS

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- Highly Proficient with programming languages Python and Java.
- Proficient with SQL.

- Some experience with C, C#, Scheme.
- Experience with data science tools Pandas, Scikit-learn, SciPy, and NumPy.
- Experienced with Git, Linux Command Line, LaTeX.
- Experience with Cross-Platform Desktop Application Development with Qt.
- Experience with REST API development with Java Spring Boot.

## HONORS AND AWARDS

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|--|-------------------------------------|
| · University Merit Scholarship                             | August 2013 - Present               |
| · Alumni Association Outstanding Junior/Senior Scholarship | Spring 2016 - Present               |
| · Dean's High Honor Roll                                   | Spring 2014, Fall 2014              |
| · Dean's Honor Roll  | Spring 2015, Fall 2015, Spring 2016 |
| · Varsity Athlete (Cross-Country, Track & Field) for CWRU  | August 2013 - Present               |
| · 5x UAA All-Academic Team                                 | Spring 2014 - Present               |