

## Joe Rickard

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### EDUCATION

**University of Colorado**, Boulder, CO

Bachelors in Computer Science, December 2019

**Notable Courses:** Performant Linear Algebra, Concurrent Programming, Database Systems, Machine Learning, Data Analysis Algorithms, Data Statistics

### EXPERIENCE

**TradeWeb**

January 2020 - Present

Java Developer

New York, NY

At Tradeweb I primarily worked on system reliability, automation to reduce manual intervention in case of failures, and internal tools to allow less-technical users to make business logic changes to back-end systems. Our systems are Apache/java with an Oracle DB.

**Enzoic**

August 2018 - December 2019

Technical Intern

Boulder, CO

My work at Enzoic involved maintenance and research for a credential integrity verification API. A portion of this role was indexing millions of new credentials leaked online each day. This data was stored in a large MongoDB database, totaling over 8 billion unique credentials. This database was engineered with hashed table relations, ensuring the data could be efficiently queried and was secure at rest.

**Deep Root Analytics**

May 2018

Statistical Analysis Intern

Washington, DC

At Deep Root I worked independently to improve the demographic targeting abilities for television ad buys. I made use of unsupervised machine learning techniques to identify behavioral patterns of target groups and to recommend time slots targeting a given group. This led to an increase in target group impressions on my test data set and was used in production. I developed data ingestion infrastructure with supporting documentation to be used in improving future projects.

**The Trade Desk**

May 2017

Technical Intern

Boulder, CO

At The Trade Desk I worked on an embedded tracking pixel which collected unique data from users' browsers. This work required extreme attention to edge case handling, as most of the errors my code resolved stemmed from rare conflicts with partner servers. My particular contribution improved the worst-case performance, allowing for customer data collection without compromising content load times.

### Competitions

I have attended 3 coding competitions hosted at CU. I was awarded first prize for an open-source PII database I designed and implemented. This contained over 2 billion data points and could be efficiently queried. This was done with MySQL, Bash, and Python. I was awarded second place for a semantic analysis interface for Twitter. This allowed a user to gauge public reaction to current events in real time. This was done with Python and the Flask framework.

**Languages:** Python, Bash, Scala, Java, MySQL, PostgreSQL, PL/SQL

**Github:** /joerickard