Joe Rickard

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EDUCATION

University of Colorado, Boulder, CO
BA in Computer Science, December 2019
Notable Courses: Performant Linear Algebra, Concurrent Programming, Database Systems, Machine Learning, Data Analysis Algorithms, Data Statistics

EXPERIENCE

Password Ping August 2018 - Present
Threat Research Intern Boulder, CO
My work at Password Ping involves maintenance and research for a credential integrity verification API. A portion of this role is indexing millions of new credentials leaked online each day. This data is stored in a large MongoDB database, totalling over 7 billion unique credentials. This database is engineered with hashed table relations, ensuring the data can be efficiently queried and is 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 space. I made use of unsupervised machine learning techniques to identify behavioral patterns of target groups and to recommend time slots for a given group. This led to an increase in target group impressions on my test data set and was put into use. 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 the embedded tracking pixel which collects unique browsing data from users' browsers to improve ad targeting. 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.

Toys2Life October 2016
BLE and Language Model development Boulder, CO
At toys2life I made significant additions to an existing C# codebase. This code processes signals from BLE radios to provide relative location and orientation. With this data, and a contextual language model I developed, I helped to produce a line of interactive talking dolls.

Competitions

I have attended 3 coding competitions hosted on-campus. At my third, 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. At my first, I was awarded second place. My team developed a semantic analysis interface for twitter, allowing a user to gauge the public reaction to current events. This was done with Python and the Flask web framework.

Languages: Python, Scala, Bash, MySQL, PostgreSQL, MongoDB, C#, C++
Github: /joerickard