Matthew Canova

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I am a Computer Scientist with a passion for Machine Learning, Natural Language Processing, and Artificial Intelligence. I have experience in QA, Product Management and back-end Software Development/API Development. I am excited to work with a high-performance team to develop elegant solutions to complex problems.

Projects   More projects and source code at **matthewcanova.github.io**

Visual QA Convolutional Neural Network - Working in the R&D phase of an end-to-end Deep Learning Visual QA system hosted in GCP, utilizing Google Cloud Storage, App Engine, and Compute Engine.

Story Point Predictor - Worked during the company's free development time to gather data on tickets with story point assignments. Used Machine Learning and NLP to train a classifier that predicts the story point value of a ticket based on the contents of the title and description.

Scam Protector - Worked with a Senior Capstone team to develop an e-mail filter by training an sklearn SVM classifier developed in Python to identify social engineering attempts against vulnerable technology users.

Opinion Extraction - Worked on a team using Stanford NLP, Liblinear, and SentiWordNet in Java to extract opinions from news articles and then identify the agent, target, and polarity of the opinion.

Twitter Bot Classifier - A suite of Python implementations for Perceptron, SVM, Naive Bayes, Logistic Regression, Decision Tree, and Random Forest classifiers — all applied to Twitter bot detection.

Education

University of Utah, Bachelor of Computer Science, 3.3 GPA; Salt Lake City, UT — Graduated Dec. 2018
Electives - Machine Learning, Deep Learning, Natural Language Processing, Artificial Intelligence, Information Extraction, Data Mining, and Advanced Data Visualization
Languages - Expert in Python, Proficient in Java and Node/Javascript, Experience with C#, C++, C

Work Experience

Principal Architect/Engineer, Self-employed   Draper, UT   2020-Present
Lead designer and architect on an end-to-end automated visual qa system driven by state of the art in Deep Learning.

Software Engineer II, Workfront   Lehi, UT   2019-2020
Developed new features in an AWS Lambda based service, including integrations with Dynamo DB, Elastic Search, and Neptune Graph DB. Helped drastically improve performance on queries against the graph db, taking response times from 8-15 seconds, down to under 2 seconds. Led the engineering design and implementation for the back-end team on the Admin Tools project.

Teaching Assistant, University of Utah   Salt Lake City, UT   2015-2018
Helped teach and mentor undergraduate Computer Science students through labs and one-on-one help in both Java and Python courses. Assisted the Professor with grading, lectures, and class logistics.

Product Manager/Sr Manager, TD Ameritrade   Draper, UT   2011-2014
Managed the Education Technology product portfolio. Lead Product Manager over the release of the Top-Down Analysis Tool Market 360. Led a team of Product Managers, UI Designers, and QA Engineers to deliver the industry-leading TDA Education Center.

QA Engineer/QA Lead, TD Ameritrade   Draper, UT   2009-2011
Led a team of QA Engineers, onsite and remote, to deliver high quality software products in an agile environment. QA Lead during the successful launch of the Curriculum and Pricing Redesign.