CHESTER HOLTZ

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EDUCATION

University of Rochester, Rochester, NY

· Honors B.S. in Computer Science (Artificial Intelligence Track) with Minor in Mathematics *June, 2017*

SKILLS

Languages & Frameworks	Java, C/C++, Lisp, Python(Numpy, scikitlearn), JavaScript(React), SQL
Tools	Git, SVN, Vim, Bash, Eclipse, Excel, LaTeX, Mathematica, Amazon MTurk, Moses

RESEARCH AND WORK EXPERIENCE

Research Experience *University of Rochester*

· Visual Intelligence & Social Media Analytics (VISTA) Lab: Working as a Research Assistant supporting Professor Jiebo Luo's research group in projects involving computer vision, big data analysis, data mining, and machine learning. Past work involved supporting the Simon School of Business and the Department of Clinical and Social Sciences in Psychology. Current work involves studying how Autism Spectrum Disorder can be detected based on text-based communication between doctors and patients.

· Social Networks, AI, and Public Health (SNAP) Lab: Working as a Research Assistant supporting Professor Henry Kautz's research group in projects involving computer vision, big data analysis, data mining, and machine learning. Current work involves studying the way language is used in ways other than simply communicating information, such as humor and persuasion in the context of politically biased news sources.

· Rochester NLP Group: Working as a Research Assistant creating structured Human Intelligence Tasks (HITS) for projects involving machine learning and natural language understanding. Current work involves studying how deep learning techniques can be leveraged for story understanding - specifically for story ending prediction.

· Simon School of Business: Supported Professor Sudarshan and his students' research in projects involving the application of various machine learning and NLP techniques to issues in business and political science (Form 10-k validation).

TA & Tutor Experience *University of Rochester*

· CSC246 Machine Learning (TA, Spring 2017)
· CSC240 Data Mining (TA)
· CSC242 Artificial Intelligence (workshop leader & TA)
· CSC172 Data Structures and Algorithms (workshop leader & TA)
· CSC171 Introduction to Computer Science (workshop leader & TA)
· CSC161 The Art of Programming (TA)
· CSUG Tutor for MTH201 Introduction to Probability and MTH150 Discrete Mathematics

JP Morgan Chase Summer, 2016 *New York, NY*

· Risk & Quantitative Technologies Intern: Designed and built framework to do analysis on business processes. Implemented approximate graph-similarity metric (Dijkman et al., 2009,2011) to compare process models. Implemented system to do ETL and visualize structured and semi-structured data. Transformations and graph algorithms were written in Java. Used the QlikView Ajax API for the browser-based dashboard.

SELECT PROJECTS (NON-COURSEWORK)

Robust Emoji Embedding and Prediction (current)

· Currently working on an effective and novel embedding framework for emoji. My work involves factorizing the asymmetric co-occurrence matrix and effectively handling the multi-sense nature of emoji across different contexts and cultural trends.

Robust Autism Spectrum Disorder Detection

· Applied OCR to extract natural language from scanned semi-structured and unstructured medical forms after de-skewing and de-identification. Extracted lexical features, topic model features (LDA) and distributed features (doc2vec RNN feature) to build ASD detection system (l_1, l_2-regularized svm).

Philosoph Trump

· Generated tweets. Implemented and applied Andrej Karpathy's Char-RNN on data collected from Trump's Twitter and Reddit's /r/philosophy subreddit. Current work involves training a query-response SMT model on a corpus composed of 5m tweets and Reddit comments.

Lisp GC

· Performed analysis and wrote paper on three classic garbage collection algorithms. Implemented parser, evaluator, REPL etc. and 3 garbage collectors Cheneys algorithm, Mark-Sweep with Tri-color marking, and Knuths classical Lisp 2 algorithm in C++.

SELECT ACADEMIC EXPERIENCES

Relevant Coursework

· Discrete Mathematics (MTH 150), Honors Caluclus and Linear Algebra (CSC 171-174), Introduction to Probability (MTH 201), Functions of a Single Variable (MTH 265)

· Honors Research Seminar (CSC200H), Autonomous Mobile Robots (CSC236), Data Mining (CSC240), Artificial Intelligence (CSC242), Machine Learning (CSC246), Theory of Computation (CSC280), Design and Analysis of Algorithms (CSC282), Advanced Machine Learning and Optimization (CSC576), MODS (Machine Learning Optimization Data Science) reading group participant

Select Papers

· A Machine Learning-based Approach to Autism Spectrum Disorder Detection from Semi-Structured and... (in submission)
· A Refutation of the Clique-Based P=NP Proofs of LaPlante and Tamta-Pande-Dhami (Arxiv: 1504.06890)
· Comparative Analysis of Classic Garbage-Collection Algorithms for a Lisp-like Language (Arxiv: 1505.00017)

HONORS

Dean's Scholarship *University of Rochester*

· Awarded Deans Scholarship for past leadership and academic achievements at U of R

DandyHacks 2016 *University of Rochester*

· Ranked first in data science and machine learning category at U Rochester's DandyHacks hackathon for Philosoph Trump Twitter bot.