Samuel Lerman

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Computer Science Qualifications

- Strong understanding of Object Oriented Programming, Data Structures, Searching/Sorting Algorithms, & Efficiency
- Programming skills in JAVA, C, C++, Python, R, Matlab, Prolog, OCaml, HTML, CSS, JavaScript, SQL, PHP, Swift, Xcode; frameworks like jQuery, AngularJS, NodeJS, Bootstrap, Flask, LESS, SKLearn, NumPy, SciPy; task runners like Grunt, Gulp, Maven; proficiency with Git and GitHub; and ability to pick up new programming languages quickly
- Expertise in Web Development: HTTP, Server-Side Scripting, Servlets, Databases, Session Management, DOM, Frameworks, AJAX, Web APIs, and Design
- Extensive research experience using machine learning techniques, modeling, data mining, & data organization

Computer Science and Mathematics Education

University of Rochester, Rochester, NY
Computer Science (BS) / Mathematics (BA), Anticipated May 2017
GPA: 3.4; Dean's List

Select Computer Science Coursework and Projects

CS Courses: JAVA & Object Oriented Programming, Data Structures, Computation & Formal Systems, Web Development, Computer Models & Limitations, Cryptography, Design & Analysis of Efficient Algorithms, Computer Organization, Database Systems, Prog. Language Design & Implementation, iOS App Dev, Machine Learning, and AI

- **Fully functional CRUD websites**
- **Clustering and classification algorithms in machine learning: Hierarchical, k-Means, kNN, SVM**
- **School Projects: Brick Breaker (video game), Monroe County Maps (shortest path from two locations), Scanner, Parser, and Evaluator for Java Arithmetic Expressions (in C), MIPS Assembly Emulator (in C), and many more**
- **Official website for Drama House (a student living community at the University of Rochester)**
- **Othello Artificial Intelligence Web App: Powerful AI that plays Othello using Alpha Beta Pruning; runs on custom Java Servlet with GUI written in jQuery and LESS**
- **Twitter Data Collector: Web app for retrieving Twitter data based on timeframe, location, and key words**
- **Machine Learning Techniques On Web Server: Random forest models of *Future Score, Rate of Progression*, and *Time Until Symptom Onset* for any disease based on any organized set of clinical trial data, with relatively high accuracy. Also outputs top baseline predictors for progression (finalist in international data contest)**

For links to my sites and more info, please visit my GitHub profile: https://github.com/slerman12.

Work Experience

Research Assistant, Machine Learning, Summer 2016 - Present - UR MEDICAL CENTER, Rochester, NY

- Created predictive models and simulations for progression of Parkinson's disease.
- Declared a top 3 finalist of the PPMI Data Challenge, a high profile data contest hosted by the Michael J. Fox Foundation which offered a first place prize of $25,000 to answer the question, "What factors at baseline predict clinical progression."
- Led our team and am receiving primary authorship on a research paper about our work, which is being submitted to Neurology. Receiving co-authorship on two additional papers by end of Spring. Interviewed for a local journal.
- Dr. Jiebo Luo used slides of my process as lecture material for Data Mining class of 120 students.

Research Assistant, Academic Year Fall 2015 - Present - UNIVERSITY OF ROCHESTER, Rochester, NY

- Under Dr. Henry Kautz, used social media data to create predictive models.

Teaching Assistant, Academic Year Spring 2016 - UNIVERSITY OF ROCHESTER, Rochester, NY

- TA for CSC 242: Artificial Intelligence.

Software Engineer, Web Developer, Summer 2015 - BRYX INC., Rochester, NY

- Front end web developer & machine learning consultant for Bryx 911.
- Developed an advance mobile and desktop platform for first responders used by firefighters, police officers, and EMTs across Rochester and Detroit.

Extracurricular Activities

- Theater
- Acting
- Drama House Webmaster
- Film Making
- Creative Writing
- Won several writing and film making contests