Matthew Levin

matt-levin.com | mlevin6@u.rochester.edu | (914) 629-6775

Education

University of Rochester, *May 2018 (Anticipated)*
Bachelor of Science in Computer Science
Overall GPA: **3.79** (Out of 4.00)

Activities: Golden Key International Honour Society, Human Computer Interaction Lab (ROC-HCI), Computer Science Undergraduate Council (CSUG), Intramural Ultimate Frisbee and Soccer
Courses: Artificial Intelligence, Algorithms, Web Programming, Linear Algebra with Differential Equations, Probability and Mathematical Statistics, Data Structures, Human Computer Interaction

Skills and Interests

Programming Languages: Python, Java, JavaScript, Bash, HTML/CSS, OCaml, MySQL
Software and Tools: NumPy, scikit-learn, Pandas, Git, Node.js, LaTeX, Postman, jQuery, Ajax
Research Interests: Machine Learning, Artificial Intelligence, Big Data, Pattern Recognition

Projects and Publications

Playlist Analyzer *(Winter 2018)*
- Analyzes Spotify users' top 100 tracks to create a shared playlist suited for a group activity, such as studying
- Uses machine learning to generate a playlist of songs tailored to an individual user's music preferences

Concurrent Shortest Paths *(Fall 2017)*
- Finds shortest paths in a graph from a source node using a parallelized delta-stepping algorithm in Java
- Achieved nearly three-hundred percent speedup compared to the sequential version of the algorithm

UR Bus *(Spring 2017)*
- Website and iOS app to track university shuttles in real time and find optimal routes using a graph algorithm
- Developed a custom API with Node.js utilizing Google Maps API and Transloc API for shuttle information

Bayesian Inference *(Spring 2016)*
- Compares inference algorithms on probabilistic graph models in Java for Artificial Intelligence course
- Individually created an exact calculator and several approximation algorithms to comply with larger datasets

T. Sen, K. Hasan, M. Tran, **M. Levin**, Y. Yang, and M. E. Hoque, Say CHEESE: Common Human Emotional Expression Set Encoder and its Application to Analyze Deceptive Communication, *IEEE International Conference on Automatic Face and Gesture Recognition*, Xi'an, China, May 2018.

Experience

Undergraduate Researcher June 2017 – Present
Human Computer Interaction Lab *Rochester, NY*
- Apply machine learning techniques to perform automated lie detection from audio and video
- Use hidden Markov models and clustering algorithms to recognize patterns in human conversation
- Deploy code on BlueHive supercomputing cluster to train and test models on massive dataset

Information Technology Consultant June 2016 – Present
Simon School of Business *Rochester, NY*
- Assist graduate students and professors in troubleshooting technical problems and configuring devices
- Automated printer configuration process for students by developing a one-click application in AppleScript

Teaching Assistant August 2017 – December 2017
Computer Science Department *Rochester, NY*
- Mentor project teams in designing and building products to meet a specific consumer need
- Grade assignments and hold weekly office hours for Human Computer Interaction course

Other Activities: Eagle Scout (Boy Scouts of America), volunteer tutor, summer music instructor, and avid guitarist and bassist