Nelson Liu

E-mail: nfliu@washington.edu
Github: github.com/nelson-liu
Website: nelsonliu.me
Phone: 714-306-9521

Education

University of Washington, Seattle, Washington USA
B.S., Statistics, B.S., Linguistics. Cumulative GPA: 3.79
Expected graduation date: June 2019

Experience

University of Washington Computer Science and Engineering, Seattle, Washington USA
Undergraduate Researcher **September 2015 - present**
Working on various machine learning and natural language processing research problems.

- Built a neural model for Supreme Court case outcome prediction from the text data of amicus briefs.
- Currently creating models for induction of non-arbitrary form meaning associations in language from large scale corpora.
- Advisor: Professor Noah A. Smith

University of Washington eScience Institute, Seattle, Washington USA
Software Engineering Intern **September 2016 - Present**
Contributing to pomegranate, a probabilistic graphical modelling library for Python.

- Writing code, usage examples, documentation, thorough unit tests, and improving testing infrastructure.

scikit-learn
Google Summer of Code Student Developer **May - August 2016**
Contributed to the popular Python machine learning library scikit-learn (13K+ Github stars) by implementing various enhancements to decision tree module (adding new impurity splitting criterion and tree pre- / post-pruning).

Massachusetts Institute of Technology CSAIL, Cambridge, Massachusetts USA
Research Intern **June 2013 - September 2014**
Wrote Scheme scripts to dynamically extract JPL and U.S. Election Atlas data for use in the START natural language question answering system and worked on its backend, Omnibase.

- Advisor: Professor Boris Katz

Selected Personal / Open Source Projects

scikit-learn
Contributor **November 2015 - Present**
Popular machine learning toolkit for Python. I contribute Python and Cython patches to the project and review user-submitted pull requests.

pomegranate
Contributor **September 2016 - Present**
Probabilistic graphical model toolkit in Python, focusing on efficient Cython implementations of hidden Markov models and probability distributions but also including discrete Bayesian networks, finite state machines, and general mixture models.

ASLSpeak
Creator, Best Use of Microsoft Tech / Best Use of Data @ DubHacks 2015 **October 2015**
Trained an artificial neural network classifier to translate sign language gestures from a Leap Motion to audio spoken on a computer.

Honors and Awards

Scipy Scholarship, 2016
Best Use of Microsoft Technology / Best Use of Data, DubHacks 2015
Winner, Hack The Dot Seattle, 2015
Finalist, AngelHack Seattle, 2015
Winner, Lockheed Martin Code Quest Sunnyvale, 2015
Winner, Improving MIT Award, MIT BitComp, 2014

Technical Skills

- Languages / Tools: Python, Cython, Java, git, some use of Unix shell scripts
- Operating Systems: Unix/Linux, OS X.