Shane Deiley

6515 Wydown Boulevard, Box 3090, Saint Louis, MO, 63105
shanedeiley@wustl.edu • (330) 550-9949 • **http://www.github.com/sdeiley**

EDUCATION

Washington University in Saint Louis, St. Louis, Missouri, USA
Bachelor of Science Candidate in Computer Science   Aug 2012 – (Exp. Grad.) May 2016
Second Major in Mathematics (Prob/Stats Focus)
- Cumulative GPA: 3.7 / 4.0
- CompSci GPA: 3.85 / 4.0
- Deans List: Fall 2012, Fall 2013, Spring 2014

Relevant Coursework: Artificial Intelligence and Machine Learning, Data Mining, Algorithms and Data Structures, Object-oriented Programming, Probability and Statistics, Statistical Modeling and more

RESEARCH EXPERIENCE

Washington University Computer Science Research Experience for Undergraduates
Undergraduate Research Student, Computer Science Department   May 2014 – Dec 2014
- Project: Parallel Data Structures
- Supervisor: Dr. Kunal Agrawal and Partner: Alex Jones, USC
- Description: Implemented and augmented an order-maintenance data structure supporting $O(1)$ time queries and $O(1)$ amortized time inserts to be utilized in parallel applications for race-condition detection. Early results indicate mere constant slowdown when on-the-fly race detection is enabled.

TECHNICAL PROJECTS

Bagged and Boosted Decision Trees, *Matlab*
- Implemented an ID3 decision tree and utilized it in random forest and boosted tree implementations
- Achieved an classification accuracy of 88% beating the professor's implementation

Game Development, *C++*
- Designed a multi-functional game for the command line enabling users to play full implementations of Reversi, Nine Almonds, or Magic Square

Topic Modeling for Classification, *Python & NumPy*
- Compared implementations of latent Dirichlet allocation (LDA) and non-negative matrix factorization (NMF) in text topic modeling qualitatively
- Analyzed the performance of a classifier using the topics as the label space

Deep Learning - Artificial Neural Networks, *Matlab*
- Created an artificial neural network of chosen size for classification
- Utilized classic forward propagation and backward propagation (gradient descent) algorithms for training

TECHNICAL SKILLS

Programming and Software
- TEX, LaTeX, Matlab, Mathematica, R, Python, Java, C/C++, Cilk, Web Development, SQL, and Visual Studio

Communication
- Extensive experience w/ Technical Writing and pair-programming; Excellent at public speaking and sales

AWARDS & HONORS

Yahoo! Case Competition Finalist   Nov 2012
- Chosen to present in class-wide case competition to freshman class and Google, Inc. representatives
- Proposed advertising solutions and design changes for Yahoo, Inc. utilizing user data

To Write Love on Her Arms Panelist   Nov 2014
- Selected by Washington University campus organization T.W.L.O.H.A. to represent the student perspective on a panel about suicide and mental health on campus
- Spoke to a large audience alongside a licensed psychiatrist, a professor of anthropology, and a professor of psychology

COMMUNITY SERVICE

Mission St. Louis, Job and Leadership Training Program   May 2014 – Sep 2014
Mentor
- Guided two formerly convicted males through the process of getting their driver's license
- Encouraged them as they set monthly goals and aided them to achieve them
- Supported them through difficult times like finding a job and enduring emotional stress

Computer Science Tutor, CSE 502N   Jan 2015 – May 2015
Tutor and Teaching Assistant
- Helped struggling students with C++ programming assignments and data structure and algorithm theory
- Taught concurrently as a teaching assistant