

Shane Deiley

CURRENT ADDRESS

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PERMANENT ADDRESS

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EDUCATION

Washington University in St. Louis

St. Louis, MO

Dual Degree Candidate, Expected Graduation: May 2016

Bachelor of Science: Computer Science

Bachelor of Science: Systems Science and Engineering

Secondary Major: *Applied Mathematics*

Total GPA: 3.79/4.0

Computer Science GPA: 4.0/4.0

Relevant Coursework

* Courses to be taken Fall 2014

Data Structures and Algorithms (Java)	Computer Science I & II (Java)	Calculus of Several Variables
Introduction to Machine Learning*	Creative Programming* (Web. Dev. & SQL)	Reliability and Quality Control
Probability and Statistics for Engineering	Object Oriented Software Development (C++)	Matrix Algebra (Linear Algebra)

TECHNICAL PROJECTS

Find relevant code repositories via <https://github.com/sdeiley/School-Assignments>

Comparing (Modeled) Genomic DNA Sequences, Java

- Implemented an open-addressing hash table to compare simulated DNA sequences represented by string sequences
- Compared the sequences by supporting efficient dictionary operations using a doubling procedure to keep the load factor below $\frac{1}{4}$

Game Development (Magic Square, Reversi, and Nine Almonds), C++

- Built from scratch each aspect of a game (game pieces, board, etc.) allowing three unique games to be playable in one program
- Practiced polymorphism, object-oriented programming, dynamic memory mgmt., copy control, and algorithm/container use

Facial Recognition and Handwritten Digit Classification, Matlab

- Proved that the squared-euclidean matrix can be derived from a linear combination including the Gram matrix
- Utilized the theory to implement functions in Matlab successfully finding correct faces and handwritten digits with 96% accuracy

TECHNICAL SKILLS

Software: Extensive experience in Java, C/C++, Cilk/Cilk+, and Unix; familiar with Matlab, Python, Mathematica, and R

Communication: Excellent public speaker, customer service provider, and salesman; familiarity with Spanish

RESEARCH EXPERIENCE

Washington University Computer Science Research Experiences for Undergraduates (REU)

St. Louis, MO

Parallel Data Structures, under Dr. Kunal Agrawal (and partner Alex Jones, USC)

Summer 2014

- 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.
- Results indicate no asymptotic detriments to a parallel program running on the *BATCHER* runtime system while operations on the OM data structure detect races.

AWARDS AND HONORS

Mentor, Job and Leadership Training Program, Mission St. Louis

St. Louis, MO

- Privileged with opportunity to mentor two formerly convicted men seeking to change the quality of their life
- Guided them through struggles of finding work and establishing credit, helped them work through personal goals, and encouraged them in their pursuits and passions in life

Summer 2014

Case Competition, Finalist, Olin Business School of Washington University

St. Louis, MO

- Proposed advertising solutions utilizing user data and market-trend analysis for Yahoo, Inc.
- Presented findings to Google Executives and the Olin Business School Class of 2016 (about 450 people)

Fall 2012

Dean's List (Fall '12, Fall '13, Spring '14)

2012-2014