

# Shane Deiley

## CURRENT ADDRESS

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## PERMANENT ADDRESS

7011 W. Western Reserve Road  
Canfield, OH 44406

## 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