

# Shane Deiley

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## OBJECTIVE

Lifelong learner and problem solver looking for software engineering opportunities to expand skill set and solve difficult problems with data-driven and analytic solutions.

## EDUCATION

**Washington University in Saint Louis**, St. Louis, Missouri, USA

Bachelor of Science Candidate in Computer Science

Aug 2012 – May 2016

Minor in Mathematics

- Cumulative GPA: 3.65 / 4.0
- Deans List: Fall 2012, Fall 2013, Spring 2014, Spring 2016

### *Relevant Coursework*

Artificial Intelligence and Machine Learning, Data Mining, Algorithms and Data Structures, Object-oriented Programming, Probability and Statistics, Statistical Modeling, Web Development, and more

## WORK EXPERIENCE

**Microsoft Corporation**, Seattle, Washington, USA

Software Development Engineer, OSG

Jul 2016 – Present

- Description: SDE in Operating Systems Group.
- Responsibilities: Various.

**Microsoft Corporation**, Seattle, Washington, USA

Software Development Engineering Intern, MPSIT

May 2015 – Aug 2015

- Project: Data Pipeline Design/Construction and Anomaly Alerting
- Supervisor: Kevin McClintock
- Description: Utilized various Azure technologies (Sql, Blob Storage, ServiceBus Queue, Cloud Services, Anomaly Detection) to implement a data pipeline for anomaly detection alerting on product signing data.
- Responsibilities: Create SSIS for ETL process, structure a series of cloud services to retrieve, format, and send data to an anomaly detection api, parse the results, and alert anomalous data.

## RESEARCH EXPERIENCE

**Washington University Department of Computer Science**

Undergraduate Research Student

Aug 2015 – May 2016 (research ongoing)

- Project: Gaussian Processes for Sorghum Biomass Yield Prediction
- Supervisor: Dr. Roman Garnett and Partner: Chip Schaff
- Description: Implemented and tested gaussian process extensions to the public GPML matlab repository. Added extensions for multi-task learning. Using model-generated test data, predictions of growth in multiple weather classified seasons were accurate after just 20 days of training.

**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.

## PERSONAL TECHNICAL PROJECTS

**Bagged and Boosted Decision Trees, Matlab**

- Implemented an ID3 decision tree and utilized it in random forest and boosted tree implementations
- Achieved a 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 for binary classification
- Utilized classic forward and backward propagation (gradient descent) algorithms for training

## TECHNICAL SKILLS

**Programming Languages and Software**

- TeX, LaTeX, Matlab, Mathematica, R, Python, Java, Hadoop, Hive, Pig, Impala, C/C#/C++, .NET, Cilk, Web Development, MySQL, T-SQL, Sql Server, Azure Sql, Azure Storage, Azure ML, Azure Cloud Services, 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
- Tutored students that needed extra help outside of my normal TA responsibilities

**ACTIVITIES****Residential Adviser, Washington University Residential Life**

Aug 2014 – May 2016

**Freshman RA**

- Trained to create and foster a community that champions diversity and inclusion.
- Mentored 44 freshman academically and experientially by living with them and supporting them through various academic and emotional difficulties.
- Coordinated numerous 300+ person events with a staff of 16.
- Counseled and supported students in extremely difficult situations such as experiencing suicidal ideation and being a victim of sexual violence.

**Cru, Christian Campus Group**

Aug 2012 – May 2016

**Director of Discipleship**

- Created a bible study in an attempt to create community amongst Christians in my dorm.
- Led other leaders in Cru to encourage them to be more proactive to underclassman, and responded to concerns about fostering new relationships.
- Learned the importance of considering a plurality of views and how to engage with them in meaningful ways.

**Strongman**

Oct 2015 – Current

**Recreational Strength Athlete**

- Compete locally in strongman competitions in which barbaric strength events result in points, and the competitor with the most points wins.
- 1st Place, Show Me Strength Challenge, Heavyweight, 2014