Sean Lane

 Provo, Utah   •   hi@sean.lane.sh   •   sean.lane.sh   •   seanlane   •   SeanTLane   •   @_seanlane

Education

Master of Science in Computer Science
Brigham Young University

December 2019

Provo, Utah
- Research interests include control systems, cybersecurity, data analysis, machine learning, and system modeling
- Master's thesis: Vulnerability Analysis of Infrastructure Systems — Graduate GPA: 3.48/4.00

Bachelor of Science in Computer Science
Brigham Young University

April 2016

Provo, Utah
- Minor in Mathematics — Cumulative GPA: 3.40/4.00
- Member of the Association for Computing Machinery, BYU Chapter and the BYU Developers Club

Tools Used: C   •   C++   •   C#   •   Java   •   JavaScript   •   Python   •   Apache Spark   •   Docker   •   Git   •   Linux

Experience

Graduate Intern
Applied Invention

May 2019 – Present

Provo, Utah
- Project lead for technical development and deployment of predictive forecasting prototype for a Fortune 500 client
- Responsible for 12x run-time performance improvement across nationwide predictions
- Refactored codebase to be responsive to data source changes and implemented continuous validation process

Tools Used: Python   •   SQL   •   Jupyter/IPython Notebooks   •   Git   •   Linux   •   Matplotlib

Director of Engineering
Achilles Heel Technologies

Jan. 2018 – Present

Provo, Utah
- Responsible for technical development, implementation, and maintenance of core product
- Representing capabilities of cyber-physical vulnerability to potential clients, investors, and stake holders
- Fostering academic and industrial partnerships among university and private research laboratories

Tools Used: Python   •   JavaScript   •   PostgreSQL   •   AngularJS   •   Docker   •   Git

Graduate Intern
Pacific Northwest National Laboratory

Jun. 2017 – Jun. 2019

Richland, Washington
- Selected for the National Security Internship Program in the Computing and Analytics Division of PNNL
- Researching methods of conducting contingency analysis of power and water infrastructure models
- Developed component models to capture integrated power and water dynamics

Tools Used: Python   •   Java   •   MATLAB   •   Jupyter/IPython Notebooks   •   Git

Research Assistant
BYU Information and Decision Algorithms Laboratories

Sep. 2015 – Jun. 2017

Provo, Utah
- Lead development of a web application using vulnerability research of cyber-physical systems
- Developed and presented project architecture to staff of sponsoring agency, the Dept. of Homeland Security
- Conducted analysis on financial market and client data to produce predictive models

Tools Used: Python   •   JavaScript   •   PostgreSQL   •   MATLAB   •   AngularJS   •   Docker   •   Flask   •   Git

Software Engineer in Test Intern
Instructure

Apr. 2016 – Jul. 2016

Salt Lake City, Utah
- Worked with the Data Analytics team to improve test coverage and deployment efficiency
- Created a framework used to test production SQL queries which are used in the Instructure ETL process
- Refactored existing codebase to facilitate project needs, like strict typing within Apache Spark SQL

Tools Used: Scala   •   JavaScript   •   Apache Spark   •   NodeJS   •   SQL   •   Docker   •   Git   •   Jira   •   SBT

Software Development Engineer Intern
Microsoft

May 2015 – Jul. 2015

Redmond, Washington
- Implemented Microsoft Office administrative feature to mitigate a social engineering attack vector
- Created a development plan and schedule with the Project Manager based on project specifications
- Integrated the project with the existing product and authored test suite to verify future feature integrity

Tools Used: C++   •   C#   •   Source Depot   •   Visual Studio