Jason Shiverick

Lead Data Scientist and Reliability Engineer

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github.com/jshiv

(281) 725-3319

Technical

Spark, Python, Linux, Docker, Ansible, Bash, Git, SQL / NoSQL, Statistical Modeling, Machine Learning, AWS

Experience

Tesla Motors *Associate Manager, Data Science | Reliability* **2015 to Present**
Grew the Data Science team and capacity within the organization. Evangelized the need for data and infrastructure to facilitate data driven decision making.

Developed Ansible/Docker deployment architecture for a Spark standalone cluster and python libraries for efficient manipulation and processing of log data.

Established an analytics workflow leveraging git version control, with jira integrations. Designed the ETL workflow using spark, airflow, jupyter and superset.

Provided direction on proactive maintenance campaign and prognostics algorithm development using machine learning techniques: *random forest, logistic regression, physics of failure*.

Tesla Motors *Senior Data Scientist* **2014 to 2015**

Innovated in the approach to Reliability Engineering by incorporating the tools of Data Science.

Established an extensive code base that provides tools to the organization for extracting, transforming, and analyzing field data at scale.

Developed a modern approach to advanced warranty simulation in Python that can account for competing failure modes in a repairable system under varying use conditions.

Tesla Motors *Reliabilty Data Scientist* **2013 to 2014**
Developed the tools required for analyzing fleet logs at scale, and characterizing usage conditions.

Developed methods to automate Weibull analysis for all parts of the vehicle. Built a statistically defined generation identifier for failure modes.

Developed statistical frame work for python: *Weibull analysis, Stress-Strength Convolution, Hypothesis testing, Best fit solver, generalized distribution framework, newton-raphson solver, ranking methods, mttf*

Ingersoll Rand *Reliability Engineer* **2011 to 2013**
Drove product reliability and provided reliability metrics to upper management.

Medtronic INC. *Product Performance Specialist* **2010 to 2011**
Contracted through Development Resource Group to provide product quality assurance support for the neuromodulation division.

Boeing Corporation *Systems Engineer* **2008 to 2009**
Contracted as a Systems Engineer through Barrios Technology to support Electrical Power System analysis for the International Space Station.

Projects

Turntable
Functional framework for multiprocessing pandas DataFrames in python.

all-spark-cluster
Simple shell scripts for deploying a containerized spark standalone cluster.

Education

Graduate Course Work (Reliability Engineering) 2012 to 2013

University of Maryland

(online) College Park, Maryland

ENRE 602: Reliability Analysis

ENRE 655: Advanced Methods in Reliability Modeling

Bachelors of Science in Aerospace Engineering 2004 to 2008

Iowa State University

Ames, Iowa

Invited Talks

PHM Socioty **2015** automotive panel discussion

ARS **2014**

Big Data in Reliability: 1st Place

Hobbies

Surfing

Climbing