Alexander Keiya Shoop

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EXPERIENCE:

Lead Data Scientist, *UXDM Research Laboratory,* Worcester, MA — Jan 2019 – Present

- Building a facial expression recognition lab application using Python and CNTK

Healthcare Data Analytics Intern, *Harvard Pilgrim Health Care,* Wellesley, MA — Jun 2018 – Jul 2018

- Supported the Market Analytics team in engaging in cost of care and trend discussions at the market and executive level
- Developed and presented a fully functional and validated Chi-Square Statistical Test Dashboard in Tableau with dynamic selections and integrated analytics data from existing business intelligence
- Participated and was a part of the winning cross-functional team that designed a mockup of the member experience view in the Employer Analytics Redesign Contest

ITS Helpdesk Specialist, *WPI,* Worcester, MA — Sep 2012 – May 2018

- Provided customer service and information technology support
- Resolved front-desk and call center support requests concerning technical issues
- Led and trained other student workers via one-on-ones

RELEVANT PROJECTS:

Automated Data Acquisition, Analysis, and Pre-processing, *Graduate Qualifying Project (GQP)* — Aug 2018 – Dec 2018

- Collaborated with four Data Science Graduate students in a data engineering role on the development of reusable Java libraries that enhance the automation of data importation, statistical analysis, and pre-processing such as feature extraction

Robust Image Classifiers for Geo-Diverse Distributions, *Machine Learning* — Aug 2018 – Dec 2018

- Developed a machine learning pipeline to improve image classification results for geographically diverse images
- Engineered a convolutional neural network (CNN) classifier using Python and TensorFlow with Google Cloud Platform (GCP)

Object Detection of Chess Pieces with aid of Artificial Intelligence Algorithms, *Computer Vision* — Aug 2018 – Dec 2018

- Utilized classical computer vision techniques and existing Google Vision API to identify chess piece objects in a scene
- Compared the object detection performance results of single and hybrid computer vision algorithms

Signal Search of Boston Liquor Venues, *Data Visualization* — Jan 2018 – Apr 2018

- Created an interactive web application using JavaScript and D3 that features a map of liquor venues in the city of Boston
- Retrieved a feed of tweets using Python from a geographical region that represent signal/popularity for a given venue

Portfolio Risk Management using Big Data Technologies, *Big Data and Cloud Technologies* — Jan 2018 – Apr 2018

- Prototyped a platform for an asset manager that makes use of Apache Spark and Amazon Web Services (AWS)
- Performed sentiment analysis on SEC financial reports and Monte Carlo simulation to calculate the Value at risk (VaR)

Using Statistical Techniques for Historical Customer Purchasing Analysis, *Statistical Analysis* — Aug 2017 – Dec 2017

- Analyzed a customer CVS dataset and created models to predict how much a customer would spend on next visit using machine learning methods such as multiple linear regression and random forest classification
- Determined the most important feature variable through Lasso and forward subset selection

EDUCATION:

Worcester Polytechnic Institute (WPI), Worcester, MA

MS: Data Science, GPA: 3.7/4.0 — Dec 2018
MS: Financial Mathematics, GPA: 3.71/4.0 — Dec 2017
BS: Actuarial Mathematics and Computer Science, GPA: 3.65/4.0, High Distinction — May 2016

SKILLS:

Programming: Python, R, JavaScript, Java, SQL
Software: Numpy, Pandas, Scikit-learn, TensorFlow, Keras, CNTK, Hadoop, Cassandra, Spark, MongoDB, Tableau, OpenCV
Languages: Trilingual (English, Japanese, French)