

# Alexander Keiya Shoop

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[akshoop.github.io](https://github.com/akshoop)

## EDUCATION:

**Worcester Polytechnic Institute (WPI), Worcester, MA**

**Master of Science: Data Science, GPA: 3.7/4.0**

Dec 2018

**Master of Science: Financial Mathematics, GPA: 3.71/4.0**

Dec 2017

**Bachelors of Science: Actuarial Mathematics and Computer Science, GPA: 3.65/4.0, High Distinction**

May 2016

## EXPERIENCE:

**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 in the winning 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

**Actuarial Intern, Sun Life Financial, Wellesley, MA**

Jun 2017 – Aug 2017

- Updated the experience studies for annual lapse for wealth management business and expenses for reinsurance business and designed a new death claim lag study using MS Excel and MS Access
- Researched the actuarial life insurance industry standards of practice and protocols

## RELEVANT PROJECTS:

**Big Data Project, Portfolio Risk Management using Big Data Technologies, WPI**

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)

**Data Visualization Project, Signal Search of Boston Liquor Venues, WPI**

Jan 2018 – Apr 2018

- Created an interactive web application using D3.js 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

**Independent Study, Evaluating Early Stage FinTech Companies via Big Data Analytical Tools,**

Aug 2017 – Dec 2017

WPI, Cambridge, MA

- Strategized with three graduate students and built an implementation plan for big data analytical projects to be carried by a 6-member undergraduate project team for sponsor companies Vestigo Ventures and Cogo Labs
- Catalogued FinTech startup investment deals received by VC firm Vestigo Ventures using proprietary SQL database
- Developed a probabilistic algorithmic prediction model for Cogo Labs on their ~3.0 PB consumer informational database

**Stats Project, Using Statistical Techniques for Historical Customer Purchasing Analysis, WPI**

Aug 2017 – Dec 2017

- Analyzed a collected 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

**Major Qualifying Project (MQP), Development of an Operational Process for Continuous Delivery,**

Oct 2015 – Dec 2015

WPI, Wall Street project center

- Researched continuous delivery tools for DevOps division of Barclays Investment Bank
- Developed an automated job creation strategy using Jenkins in coordination with Promoted Builds plugin for Prime Financing team
- Presented to the team's manager a visualization of software builds and promotions through pivot tables/charts

## SKILLS:

**Programming languages:** Python, R, JavaScript, SQL, Java

**Software:** Git, Numpy, Pandas, Scikit-learn, Hadoop, Cassandra, Spark, MongoDB, Tableau, OpenCV, Bloomberg Terminal

**Languages:** Trilingual (English, Japanese, French)

**CERTIFICATIONS:** Society of Actuaries (SOA) Exam P/1, Exam FM/2, Bloomberg Market Concepts