Vignesh Natarajan

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EDUCATION

Maryville University May 2019
Bachelor of Sciences in Actuarial Science *GPA*: 3.93/4.00

University of California-Berkeley Fall 2016
General Transfer Coursework *GPA: N/A*

EXPERIENCE

The Education Insurance Corporation March 2019 – Present
Data Science and Actuarial, Chicago, IL
Data Scientist

- Data Science team member focused on implementing new data sets, data cleaning and preparation, machine learning, feature engineering, and web development using Python, R, and MySQL.
- Implementing and leading initiative on incorporating new features to current clustering algorithm to improve salary prediction – primarily focusing on incorporating Federal Salary as a feature.
- Scraping websites using Python (Selenium and Beautiful Soup) to implement new data sources into current data pool and creating effective data pipelines.
- Took initiative and coded and implemented the current clustering algorithm version using Python – K-nearest neighbors algorithm with MAE reduced by 23%.
- Created and currently deploying pricing algorithm and implementing a web application using Python Flask web framework for internal use to price premiums for clients – streamlining process by connecting Python and R codes into web framework.
- Automated multiple manual processes using R and Python to streamline workflow while ensuring accuracy – estimated 90% reduction in time used.
- Analyzed and compiled data pool anomalies and distributions for internal use.

Reinsurance Group of America June 2018 – December 2018
Global Research, St. Louis, MO
Data Science and Research Intern

- Joined global research and data science team responsible for developing an accelerated underwriting platform based on Spark, HIVE, Python, and MS SQL Server scripts.
- Analyzed insulin data using MS SQL to implement a new feature in the accelerated underwriting platform.
- Lead effort on implementing a new lapse model to incorporate into current life insurance products.
- Utilized HIVE to analyze pension data to test the viability of creating a new industry standard model.
- Cleaned data to prepare for modeling while using MS SQL to securely store data for usage.

RESEARCH AND PROJECTS

Huawei DriveML Reinforcement Learning

- Designed an agent to safely traverse various simulated maps

ASHRAE – Energy Predictor III

- Coded a regression machine learning model using Python to predict energy usage

Loss Ratio Research

- Selected to write comprehensive summary of a research proposal, arguing that loss projection may be improved by incorporating least-squares approach, that recognizes dynamic parameters
- Compiled and wrote the final version of the paper and submitted the paper to the Society of Actuaries – currently under committee review

SKILLS

Languages: Python, R, MySQL, and familiar with HTML/CSS, JavaScript and C/C++
Libraries and Frameworks: Pandas, Selenium, Flask, Numpy, BeautifulSoup, Scikit Learn, Matplotlib, Bokeh, SQLAlchemy
Software: MS SQL Server, Git
Communication Languages: English, Tamil, French