Homa Almasieh . Jarvis Consulting

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Skills

Proficient: Java, Linux/Bash, Machine Learning and Data Analytics, Statistics, RDBMS/SQL, Tableau, Agile/Scrum, Git

Competent: Pandas, Numpy, Scipy, Scikit-Learn, DHTML/CSS

Familiar: R, APIs, Tensorflow/Deep learning, Flask, Google Cloud Platform(GCP)

Jarvis Projects

Project source code: https://github.com/jarviscanada/jarvis_data_eng_HomaAlmasieh

Cluster Monitor [GitHub]: Implemented a Monitoring Agent on a node/server within the linux cluster to collect the hardware specifications and monitor the cluster node resource usage in real time. This Monitoring Agent contains a PostgreSQL server installed within a Docker container that collects information submitted through bash scripts installed on each node.

Core Java Apps [GitHub]:

- Twitter App: Curabitur laoreet tristique leo, eget suscipit nisi. Sed in sodales ex. Maecenas vitae tincidunt dui, et eleifend quam.
- JDBC App: Curabitur laoreet tristique leo, eget suscipit nisi. Sed in sodales ex. Maecenas vitae tincidunt dui, et eleifend quam.
- Grep App: Curabitur laoreet tristique leo, eget suscipit nisi. Sed in sodales ex. Maecenas vitae tincidunt dui, et eleifend quam.

Springboot App [GitHub]: Not Started

Python Data Analytics [GitHub]: Not Started

Hadoop [GitHub]: Not Started

Spark [GitHub]: Not Started

Cloud/DevOps [GitHub]: Not Started

Highlighted Projects

Spotify Analysis [GitHub]: Colaborated in a team of five to determine what features impact the Popularity index of any given song on Spotify using Python. By analyzing various physical features of a song as well as some peripheral features, we look to identify a pattern within how a song garners a successful Popularity index. We have created a machine learning model that can predict the popularity of a song based on these features.

Credit Risk Analysis [GitHub]: Used the credit card credit dataset from LendingClub, a peer-to-peer lending services company, I applied oversample the data using the RandomOverSampler and SMOTE algorithms, and undersample the data using the ClusterCentroids algorithm. Then, I used a combinatorial approach of over and undersampling using the SMOTEENN algorithm. Next, I compared two new machine learning models BalancedRandomForestClassifier and EasyEnsembleClassifier that reduce bias. Lastly, I evaluated the performance of these models to be used to predict credit risk.

Spotify Analysis [GitHub]: Processed the dataset in order to compile, train, and evaluate the neural network model, using Pandas and Scikit-Learn. Designed a binary classification model to analyze and classify the success of charitable donations, using TensorFlow.

Professional Experiences

Data Engineer, Jarvis (2021-present): - Implemented various data projects using tools and technologies such as Linux/Bash, RDBMS/SQL, Java, Docker - Collaborated in the develope team and followed the Scrum Agile methology by hosting daily meetings - used Git and GitFlow in every project

College Instructor, Vaughan College (2017-2021): - Planned and presented math lessons to facilitate students understanding in the college. - Prepared and distributed learning materials such as notes, assignments, tests, and final examinations - Ensured that the classroom remains safe and conductive to learning - Graded assessments in a timely manner - Documented and reported on students' progress - Attended meetings with parents and staffs

Research Associate, Ryerson University (2015-2017): - Post-Doctoral Fellowship (PDF) at Electrical & Computer Department of Ryerson University - Designed a simulation of energy efficient equipment and optimization of single house load management and energy generation - Worked on the Gray Predictive Models for using in HVAC residential

Assistant Professor, Isfahan University (2003-2015): - Faculty member of Isfahan University for more than 13 years - Developed curricula and delivered course materials - Conducted research with over 20 published paper with more than 528 citation - Supervised and advised on dissertation in undergraduate and graduate students - Specialized in analyzing and synthesizing applied problems and algorithms - Journal Reviewer of International Journals in Mathematics, Engineering, Economic and Science - Expertised in all areas of Applied Mathematics including but not limited to Numerical Analysis, ODEs, PDEs, Finance Mathematical Modeling, Stochastic Calculus, Operational Research, Integral Equations, Linear Algebra, Numerical Integration and Numerical Derivatives

Education

Azad University (2005-2010), Doctor of Philosophy of Applied Mathematics (Integral Equations), Mathematics

Yazd University (2001-2003), Master of Applied Mathematics (Optimal Control), Mathematics

Isfahan University (1997-2001), Bachelor of Applied Mathematics, Mathematics

Miscellaneous

- Data Analytics- University of Toronto (2021)
- List of my publications can be accessed through this link
- Strong research scientist with over 20 published articles with more than 528 citation, click here