Sowon Ham . Jarvis Consulting

I am a recent graduate from the University of Toronto - St. George Campus that studied statistics and mathematics for my Bachelor's degree. During my studies, it focused mostly on regression models, A/B testing, hypothesis testing, design and analysis of experiments, and a few machine learning methods. As I have been performing elementary to advanced data and business analysis on smaller data sets in my degree, to get further involved in this industry on an organizational level scale I have joined Jarvis as a data engineer to pursue my passion. Jarvis uses the agile framework implemented using scrum for the project and team management. My team and I have been holding daily scrums and biweekly scrum retros to discuss daily tickets to complete and sprint backlog for the next sprint respectively. Additionally, I deployed Minimum Viable Product (MVP) and a Proof of Concept (PoC) for the Jarvis team (Linux Cluster Administration team) and their clients (London Gift Shop) respectively by using the most recent and growing technologies in the data and business field such as Docker, SQL, Pandas, NumPy, Seaborn, Jupyter Notebook, Linux, etc. I strive to become a professional data/business analyst or any related profession to deploy products and reports of the utmost quality that can satisfy the client and easily be managed by other engineers.

Skills

Proficient: RDBMS/SQL, Pandas, NumPy, Matplotlib/Seaborn, Jupyter Notebook, R/RMarkdown, Microsoft Excel, Statistics (A/B Testing, Hypothesis Testing, Time Series Analysis), Statistical Modelling (Regression and Classification Models), Linux/Bash, Agile/Scrum, Git/GitFlow, Docker, LaTeX, AutoIt, Experimental Design

Competent: Python, Tidyverse, Julia, Java, Stochastic Processes, Predictive Forecasting

Familiar: Machine Learning (Neural Network, Cluster Algorithms), Cloud Networking, Virtual Network Computing (VNC), Verilog, C#

Jarvis Projects

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

Linux Cluster Resource Monitoring App [GitHub]: Developed a minimum viable product for the Jarvis Linux Cluster Administration team for monitoring the resource usage and hardware specifications for all nodes. The application utilizes bash scripting to automatically collect hardware specifications from each cluster node. Additionally, the recording of the resource usage is automatically collected every minute into a relational database management system, PostgreSQL which Docker was used to setting up this container, using CRONTAB on Linux. Lastly, the project consisted of querying a few elementary data/business questions using SQL with the resource usage collected in our database.

Python Data Analytics [GitHub]: Performed data analysis on an e-commerce company using the data they provided through ETL processing which then was loaded into our PostgreSQL data warehouse. To grasp a basic understanding of the data set we used SQL commands on IntelliJ as a PostgreSQL CLI tool to perform elementary data analysis. In addition, to provide the e-commerce company with the reports and diagrams the Jarvis data analytics team used Jupyter Notebook as a primary platform. The connection between Jupyter Notebook and the data warehouse was established using Docker network. Furthermore, we used several packages in Python such as Pandas, NumPy, Matplotlib, etc. to give the client a meaningful analysis that can help them improve their revenue. Overall, this project identified different groups of customers based on their transactional data to increase this e-commerce company's profitability and efficiency.

Highlighted Projects

Computer Automation: This project presents automating a complex and lengthy set of instructions on Windows OS using AutoIt to diminish labor on the repetitive task that I desired to perform. Furthermore, the project utilized external image and pixel searching libraries as a cue to perform different tasks depending on the image or pixel. The automation consisted of performing keyboard and cursor control actions based on the Windows API which was very time-sensitive due to the nature of the platform.

Data Analysis on Computer Automation: Designed and performed a replicated exponential factorial experiment on the computer automation project above to abolish the ambiguity and precisely determine the efficiency of two contrasting scripts. Precisely, the automation appeared to be faster and more efficient with different delays between each keyboard or mouse action. Additionally, the script seemed more accurate when using image searching versus pixel searching on a specific area and vice versa. Overall, deployed a report based on the experiment conducted and made statistical conclusions on which of the two methods should be used.

Non-linear Regression Model with a Neural Network: Implemented a fully-connected neural network (multi-layer perceptron) with a 10-dimensional hidden layer with a trigonometric non-linearity. Utilizing Julia and certain packages such as Zygote I performed gradient-descent using automatic differentiation to estimate sample parameters given the batch size, model variance, and learning rate. After implementing the basic neural network for the non-linear regression model I adjusted the neural network to learn both the mean and variance of the Gaussian model. The project was deployed in a report form using Julia Markdown format.

Professional Experiences

Data Analyst Consultant, Jarvis Consulting Group (2021 - Present): Designed and implemented software projects and data analytical reports using a diverse set of tools such as SQL, Pandas, Git, Docker, GCP, and Jupyter Notebook while collaborating with scrum team members in an Agile environment. Developed technical project management skills such as following the SDLC life cycle to maintain software and data projects more consistently and successfully using the GitFlow methodology on our remote repository.

English-to-Korean & Korean-to-English Translator, KCC Chemical (2015 - 2018): Translated and interpreted various forms of documents such as e-mails, letters, phone calls, etc., and in-person business queries to assist the company owner in communicating with foreign clients. Brainstormed and discussed with the owner to confirm the translation or interpretation of the queries to keep a precise nuance in the translations. Developed an immense amount of communication and soft skills during this position due to the nature of the work and provided sensitive and important information discretely to the owner for security purposes.

Education

University of Toronto - St. George Campus (2017-2021), Honours Bachelor of Science, Statistics and Mathematics

Miscellaneous

- Volunteer Work @St. Paschal Baylon Church: Performed and organized crew members to designate which areas are needed to be cleaned.
- Badminton Player: Organized a group of friends to play badminton together frequently and booked a court on available timeslots.
- Automation Scripts: Built automation scripts for Windows OS for daily purposes to launch particular programs on start and other tasks on AutoIt.