VINH TRAN

vinhtran8505@gmail.com
www.linkedin.com/in/livinhtran
571 - 2760306
https://vinhtrands.github.io

>> DATA SCIENCE | MACHINE LEARNING | ANALYTIC

MOTIVATION

I am passionate about solving business problems using Data Science & Machine Learning. I systematically & creatively use my skillset to add tangible value to the team, the business, and the end-user. I am constantly learning, and always looking to improve

SKILLS & TOOLS

Programming: Python (Base, Pandas, Numpy, Matplotlib, Scikit-Learn, Keras), SQL, R

Machine Learning: Linear Regression, Logistic Regression, Decision Trees, Random Forest, KNN, k-means, PCA, Association Rule Learning, Causal Impact Analysis

Other: Github, Tableau, Excel, MS Office, Jupyter Notebook, Google Search

EXPERIENCE

Chief Engineer - Tower Companies

2020 - 2021

- Collect *data* for water and electric consumption to *analyze for anomalies*.
- Gather *data* on all safety valves and *deploy* weekly safety checks.
- *Manage* construction projects on-site and day-to-day operations.
- *Improve* and *update* standard operating procedures for fire and life safety.

Assistant Chief Engineer - Cushman & Wakefield

2019-2020

- Collect *data* on pumps and air handler units to *analyze operation efficiency*.
- Gather *data* on water and energy usage for *energy consumption analysis*.
- Create a new log that *reduces* daily plant reading logs from *3* pages to *1* page by reducing spaces between log cells and removing redundant information.

Engineer - JBG Smith

2012-2019

- *Gather and track data* for perimeter electric heaters to reduce power consumption. By adjusting airflow velocity and start/stop time, we *reduced energy usage by 23%*.
- *Observe* weather *patterns* to optimize outside air dampers and cooling towers.
- Contribute excellent *teamwork* environment through collaboration and a *"we're here to help"* attitude.

PROJECTS

Assessing Campaign Performance Using Chi-Square Test for Independence

- Help customer assess the performance of an ad campaign strategy with the overall aim of optimizing campaign ROI! Ran an A/B Test by applying the Chi-Square Test For Independence and concluded that there was no significant difference between mailer type and signup rate. With this insight, we learned that expensive mail doesn't necessarily mean an increase in ROI.

Predicting Customer Loyalty Using ML

- 50% of the client's customer base could not be tagged with a loyalty score. To solve this, we built & compared 3 Machine Learning models(Linear Regression, Decision Tree, and Random Forest) to find relationships between customer metrics and loyalty scores for those customers who were tagged and used this to predict the loyalty score metric for those who were not. Random Forest won the predictive accuracy of 0.955. Having these loyalty scores for all customers facilitates more accurate and relevant customer tracking and targeting.

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PROJECTS

Creating An Image Search Engine Using Deep Learning

- Client's customers struggle to find products they are looking for on their website, to solve this, we implemented a pre-trained VGG16 network, added a Global Average Pooling Layer at the end of the VGG16, and used "feature vector" to compare image similarity. We then used Cosine Similarity to compare the search feature vector with all base-set feature vectors & returned the N smallest values. These represent our "most similar" images - the ones that return to the customers.

Finding Alcohol Product Relationships Using Association Rule Learning

- With the client's alcohol transactional data, we examine & analyze the strength of relationship between different products using Association Rule Learning, specifically Apriori. We found the strongest relationship between two products labeled as "gifts.", a connection between French wines and other French wines, and an association between products labeled "small." These are valuable insights for marketing and customer-facing stakeholders.

Earthquake Tracking Dashboard Using Tableau

- Used Tableau to create an interactive earthquake analysis dashboard.

COURSES & CERTS

DATA SCIENCE INFINITY

Actionable Learnings: Extracting & manipulating data using SQL. Application of statistical concepts such as hypothesis tests for measuring the effect of AB Tests. Utilizing GitHub for version control and collaboration. Using Python for data analysis, manipulation, and visualization. Applying data preparation steps for ML, including missing values, categorical variable encoding, outliers, feature scaling, feature selection & model validation. Applying Machine Learning algorithms for regression, classification, clustering, association rule learning, and causal impact analysis for measuring the impact of an event over time. Machine Learning pipelines to streamline the ML pre-processing & modelling phase. Deployment of a ML pipeline onto a live website using Flask & Heroku. Turning business problems into Data Science solutions.

GOOGLE DATA ANALYTICS PROFESSIONAL CERTIFICATION

Actionable Learnings: Immersive understanding of the practices and processes a junior or associate data analyst uses in their day-to-day job. Apply key analytical skills (data cleaning, analysis, & visualization) and tools (spreadsheets, SQL, R programming, Tableau). Clean and organize data for analysis & complete analysis calculations using spreadsheets, SQL, and R programming. Visualize and present data findings in dashboards, presentations, and commonly used visualization platforms.