HARSH HEGDE

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EDUCATION

University of Michigan December 2022
Master of Science, Industrial Engineering & Operations Research
Fellow, Tauber Institute for Global Operations
Courses: Linear Programming, Dynamic Programming, Optimization Methods for Supply Chain, Regression Analysis
Advanced Data Analytics, Simulation Design & Analysis, Big Data Management, Behavioral Economics

National Institute of Technology Goa June 2020
Bachelor of Technology, Electronics and Communication Engineering
Courses: Object Oriented Programming, Data Structures & Algorithm, Informations Theory & Coding, Wireless Communication
Computer Architecture & Organisation, Control Systems, VLSI Circuit Design, Digital Image Processing

EXPERIENCE

Pricing Decisions Analyst Jan 2023 - Present
Grainger, Inc. ***Python, SQL, Teradata, Excel***

- Developed and executed a highly effective data-driven dynamic pricing strategy for Grainger's custom freight contracts across multiple product hierarchies. Utilized advanced demand forecasting techniques and pricing simulations using Python to accurately predict and optimize pricing, resulting in a projected boost of $1.09M in freight revenue.
- Created a pricing algorithm to support deal formation by aligning customized price offerings with customer segmentation, product profitability, and market dynamics. Achieved a 10% improvement in deal conversion rates and enhanced profit margins.

Operations Research Engineer Intern May 2022 - August 2022
General Motors ***Python, SQL, Tableau, Excel***

- Spearheaded the design and implementation of a machine learning-powered decision-making and forecasting software for feasibility prediction and cost-benefit analyses for computer vision devices, leading to successful pilot deployment at two assemblies.
- Conducted comprehensive evaluation and implemented guidelines for leveraging computer vision applications to address safety concerns in manufacturing cells using FMEA analysis, reduced annual downtime by 30% and generated cost savings of $180K.

Software Engineer August 2020 - August 2021
Amadeus IT Group ***Java, JavaScript, Python***

- Conceptualized and deployed a novel distance-based machine learning algorithm within Enrich Miles Malaysia Airlines loyalty programs leveraging regression models to predict customer behavior and churn, resulted in substantial savings of $100K
- Created predictive models at scale to optimize airline ticket booking engines across diverse e-commerce products, achieved a remarkable 13% increase in airline client renewal rates through effective development, customization, and maintenance efforts.
- Accelerated team project delivery by 2 weeks in framework transformation projects by utilizing newly acquired Agile Scrum methodologies; recognized as "Best Employee of the Quarter" for outstanding contributions.

Business Intelligence Analyst Intern May 2019 - September 2019
Reach Technologies: HolaGraph ***Excel, PowerPoint***

- Developed end-to-end product roadmap and business strategy for HolaGraph: a recruitment platform for rural India. Oversaw entire product lifecycle and successfully edited pitch decks for venture capital, resulting in a notable 10% increase in user growth.
- Conducted comprehensive analysis of the global freelance market to identify lucrative market segments for product feasibility assessment. Created an effective linear business growth strategy and achieved a significant 35% reduction in marketing costs.

SKILLS

Languages/Packages: Python, Gurobi, SQL, R, Java, C, C++, HTML, MATLAB, TensorFlow, PyTorch, SciPy
Software: Tableau, Teradata SQL Assistant, SAS, Snowflake, Power BI, Jupyter Notebook, RStudio, Git, Excel
Machine Learning Toolkit: Regression, Decision Trees, k-NN, Random Forests, Clustering, Naive-Bayes
Awards: Goa Scholars 2022, India Runner-Up - Wipro Quiz 2018, National Finalist - Tata Crucible Quiz 2018

PROJECTS

- **Simulation and Analysis of Bus Transportation Systems in the City of Ann Arbor** (Python, Gurobi, Excel): Evaluated the operational feasibility of electric, hybrid, and conventional buses in the city of Ann Arbor by conducting Markov Chain Monte Carlo simulations. Utilized various metrics to analyze the viability of each bus type within the simulated bus system.
- **Boston Blue Bike Data Analysis** (Python, SQL): Evaluated the impact of seasonality on bluebike usage in Boston. Employed multiple linear regression to analyze various factors, including weather conditions and COVID-19 vaccination rates, in order to provide valuable insights into usage patterns.
- **Data Analysis of Teams in the Indian Premier League** (Excel): Measured technical efficiency of 8 teams in the Indian Premier League over 3 seasons using a CCR and BCC model of linear programming, using expenses and performance as metrics.
- **Analysis of Personal Key Indicators of Heart Disease** (Python, Excel): Analysed CDC's heart data to gain an insight into the key predictors of heart diseases using data-mining and supervised learning methods such as Support Vector Machine, K-nearest neighbor, and Logistic Regression, and to identify machine learning classifiers with the highest accuracy.