RAMI SUBRAMANIAM

Summary

Twelve years of experience in data analysis and engineering. Passionate about unlocking the power of data to reveal insights and arrive at innovative solutions. Proven record utilizing advanced statistical and visualization tools to model large datasets. Recognized by management for teamwork, and independent execution of forward-thinking projects. Outside of work bicycle touring is my passion—toured 1000 miles across Europe in 2016.

Experience

Metis
Boston, MA
Data Scientist
2020

Completed Metis's accredited data science bootcamp focused on Python programming, machine learning, statistical modeling, data visualization, project design, and communication. *Projects Include:*

- **Off the Beaten Path:** Built an application which provides users a list of relatively unknown destinations to visit based on interests and location. Utilized NLP to extract descriptive attributes for over 10,000 towns around the world.
- **Personality Analysis:** Scraped every script from the show Friends and utilized NLP/Topic Modeling to uncover patterns in the characters' speech to develop a personality profile.
- **Maximizing Profit for your Airbnb**: Evaluated rental history for over 20,000 homes in Berlin area to determine which factors are critical for increasing profit. Utilized Random Forest Classifier.
- **Predict Home Energy Use**: Optimized Linear Regression models to study the effect climatic conditions had on home energy usage for the city of London. Scraped 2 years of weather data.

Entegris
Boston, MA
Senior Process Engineer
2017 to 2020

Responsible for structured problem solving to reduce equipment downtime, improve yield, and conduct risk analysis to assess the impact of changes to the process. Employed Lean/Six Sigma principles to identify and develop strategies to eliminate any form of waste and minimize product variation.

Notable Achievements:

Data Mining and Modeling – Implemented processes to transform our team to make sound decisions based on data rather than relying on past experiences. Collected, cleansed, and provided modeling and analysis for structured/unstructured data creating a prototype for company-wide use. *Outcomes*:

- Developed SQL query to examine 1 million+ row datasets to supplant the need for a costly and resource intensive test. Utilized regression analysis, Gage R&R, and bivariate normal method to present the case for removing this test to upper management. Saves ~ $20,000 annually
- Reduced yield loss by 7% using advanced SQL queries that joined testing data from every process step to identify trends and predict failures before they occur
- Improved yield 4% by conducting a Design of Experiment (DOE) to determine optimum process conditions for a low yield product
- Co-led project employing SAP to forecast production and material needs for our division. Designed the method for acquiring and analyzing the data to set up SAP.

Lean, Six Sigma and cost-savings projects

- Saved $100,000 annually by leading a project to qualify a new chemical supplier. Managed the data collection, statistical/risk analysis, and technical presentation to executives.
- Leveraged Camline (Data visualization software) to automatically alert operators of potential issues. Reduced downtime and material usage.
- Incorporated several ergonomic concepts to mitigate risk of job-related injury

Samsung Electronics
Austin, TX
Process Engineer
2011 to 2016

Managed the installation, setup, and qualification of equipment during production ramping. Troubleshot issues related to equipment, production, and quality with rapid turnaround time. Advanced data analysis of equipment metrics such as equipment downtime, sensory feedback, and defect history to improve performance.

Notable Achievements

- Saved $35,000/month- devised, tested, and implemented a plan to reduce chemical usage
- Improved throughput 20% - Analyzed CAPA requirements and shifted production to under-utilized equipment to run a high-demand process

S&B Engineers and Constructors
Houston, TX
Design Engineer
2007 to 2009

Designed refinery equipment: pumps, pressure vessels, heat exchangers, and piping systems. Conducted business and cost evaluations for processing plants, considering equipment costs, labor costs, environmental effects, product needs and plant specification

Contact

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Education

University of Houston
MS Chemical Engineering 2011

Johns Hopkins University
BS Mechanical Engineering 2007

Skills

DATA SCIENCE + MACHINE LEARNING
Classification
Regression
Natural Language Proceessing
Web Scraping

LANGUAGES/TOOLS
Python
Pandas
Numpy
Scikit-learn
SQL
Tableau
Minitab
HTML/CSS
Hadoop
SAP

METHODOLOGIES
DOE
Statistical Process Control(SPC)
Troubleshooting
Trend Identification
Lean/Six Sigma