Vineet Kumar

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Summary

Experienced data analyst with over 8 years in healthcare and medical device analytics. Proven track record in developing statistical models, conducting rigorous data analysis, and creating machine learning algorithms to drive insights and improve operational efficiency.

Skills

Languages: Python, SQL, SAS

Technologies: Databricks, Azure DB, Flask, MySQL, Git, OpenCV, PyTorch, TensorFlow, spaCy, PyCharm, Spider, Jupyter, SAS Systems, Microstrategy, Tableau, SPSS, Google Colab

Methodologies: Agile, Scrum, OOP, Version Control (GitHub), Web frameworks (Django, Flask), Cloud Deployment (AWS), Business Intelligence Tools (Tableau)

Python Libraries: Pandas, NumPy, Seaborn, Matplotlib, scikit-learn

Statistical Techniques: EDA, Univariate and Bivariate analysis, Feature Engineering (PCA), Imputation Techniques, Hypothesis Testing (z-test, t-test, ANOVA)

Machine Learning: Model Building, Overfitting, Underfitting, Regressions (R^2, Adjusted R^2, Regularization Techniques, Regression Algorithms: Linear, Polynomial, KNN, RF, DT, SVR), Classifications (Confusion Matrix, Classification Algorithms: Logistic, SVM, Naive Bayes)

Experience

Strive Health Services — Nashville, TN
Sr. Business Analyst — *May 2023 – Present*

- Developed and implemented methodologies to analyze trends in prior authorization and denial rates, enhancing decision-making processes.
- Classified client providers based on utilization metrics, optimizing resource allocation and service delivery.
- Interpreted descriptive data to craft patient narratives through diagnostic analytics, providing actionable insights for clinical decision-making.

Sinai Health Service — Boston, MA
Data Aalyst (Biometry) — *November 2021 – May 2023*

- Analyzed large datasets from medical devices to identify trends, anomalies, and patterns, enabling data-driven decisions in product development and clinical trials.
- Collaborated with cross-functional teams, including engineers and healthcare professionals, to interpret data from medical devices, providing actionable insights that improved device safety and efficacy.
- Developed and validated statistical models to assess the performance and reliability of medical devices, supporting regulatory submissions and compliance with industry standards.

Omada Health — Boston, MA
Data Analyst (Biometry) — *September 2018 – October 2021*

- Designed and implemented statistical protocols for evaluating the quality and reliability of medical devices during the manufacturing process.
- Analyzed manufacturing data to identify trends and variations, providing insights that led to process improvements and increased production efficiency.
- Collaborated with engineering and quality assurance teams to interpret statistical findings, driving data-informed decisions that enhanced product safety and performance.

Projects

Medical Image Classification

* Implement a deep learning model to classify medical images (e.g., X-rays, MRIs) into different categories such as normal or abnormal.

Predictive Modeling for Patient Readmission

* Develop a machine learning model to predict the likelihood of patient readmission within 30 days of discharge using electronic health record (EHR) data.

Survival Analysis for Cancer Patients

* Use survival analysis techniques to model and predict the survival times of cancer patients based on demographic and treatment variables.

Education

University of Texas Dallas, TX
MS in Computational Science *2012 – 2014*

National Academy of Naturopathy Chandigarh, India
Associate Degree in Alternative Medicine (Naturopathy) *2009 – 2011*