SAJAN SINGH SHERGILL (He/His)

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EDUCATION

Pace University, Seidenberg School of Computer Science and Information Systems   New York, NY
Master of Science (MS) in Data Science | Concentration: Machine Learning   May 2026

Guru Nanak Khalsa College of Arts, Science and Commerce   Mumbai, India
Bachelor of Science (BS) in Computer Science | Concentration: Software Development Engineering in Test | GPA: 3.65   April 2021

RELEVANT COURSEWORK

Database Programming | Data Modeling | Data Analytics | Data Visualization | Mathematics | Statistics | Data Science
Machine Learning | Advanced Analytics | Feature Engineering

TECHNICAL SKILLS

Programming Languages: Python, SQL | **Database Management:** SQL/MYSQL, PostgreSQL
Data Visualization Tools: Microsoft Power BI, Data Studio, Tableau, MS Excel
Libraries: Python (NumPy, Pandas, Matplotlib, Seaborn, Statsmodel, Pyplot)
Machine Learning Algorithms: Naive Bayes, Decision tree, KNN algorithm, K-Means algorithm, Linear and Logistic Regression
Certifications: Google Data Analytics Professional Certificate (October 2024), Google AI Essentials (August 2024)

VIRTUAL WORK EXPERIENCE

Quantium Data Analytics Job Simulation, The Forage   October 2024
- Utlized customer transaction datasets to extract insights using Jupyter Notebook, identifying benchmark stores for conducting uplift testing on trial store layouts.
- Created comprehensive reports for the Category Manager in Microsoft PowerPoint, facilitating informed strategic decisions and enhancing commercial applications.

BCG Data Science Job Simulation, The Forage   November 2024
- Completed a customer churn analysis simulation for XYZ Analytics, identifying churn, client and historical price data and outlining a strategic investigation approach.
- Conducted data analysis using Python, Pandas and NumPy, then completed the engineering and optimization of a random forest model, achieving an 85% accuracy rate in predicting customer churn.
- Employed data visualization techniques such as histograms, heat maps, box plots, and hypothesis framing for trend interpretation, delivering a concise executive summary for the Associate Director with actionable insights. This improved prototype designs for predictive systems.

PERSONAL AND ACADEMIC PROJECTS

Predicted Student Performance Using Machine Learning – Project Link   December 2024 – January 2025
- Conducted exploratory data analysis (EDA) to uncover trends between demographic factors, parental education, and student performance in math, reading, and writing.
- Engineered features and tested multiple machine learning models, including Linear Regression, Decision Trees, and Random Forests, to enhance prediction accuracy.
- Achieved optimal results with a Random Forest model, evaluated using R^2 and Mean Absolute Error (MAE).
- Derived actionable insights, such as the influence of parental education and lunch type on performance, highlighting the role of data-driven approaches in education.

Time Series Forecasting for NYC Electricity Consumption (ACADEMIC)   October 2024 – December 2024
- Processed daily electricity consumption data for all five NYC boroughs, generating monthly and yearly aggregated datasets for analysis.
- Built a forecasting model using Facebook Prophet to predict electricity consumption across daily, monthly, and yearly timeframes.
- Tuned model parameters (growth types, seasonality, and changepoints) to improve prediction accuracy, achieving low Mean Absolute Error (MAE) and high R^2 scores.
- Visualized historical and forecasted trends using Python libraries, facilitating actionable insights for energy planning and consumption optimization.
- Documented the project in a Jupyter Notebook with tabular results, visual plots, and clear narratives, delivering a comprehensive report.

Improved Food Delivery Cost and Profitability Analysis   February 2024 – March 2024

- Analyzed and processed data using Python, Pandas, NumPy and Google CoLab to assess food delivery cost structures and drive profitability through strategic recommendations.
- Visualized profit distribution using histograms, pie charts, and bar charts, identifying a loss from orders with negative profits.
- Developed a new strategy suggesting a commission rate of 30% and a 6% discount rate, which could significantly improve overall profitability.

PROFESSIONAL EXPERIENCE

Eduvanz Financing Private Limited   Mumbai, India

Quality Assurance Analyst Team Lead   February 2022 – October 2023

- Led the QA analysis and integration of Salesforce LMS with Stride, Inc.'s business module in Delhi, India, increasing operational efficiency by 40% and fostering collaborative stakeholder relations through effective team leadership.
- Managed a team of four to test Stride's business customer-facing website and mobile app, responsible for generating quick leads with credit risk-check functionality.

Software Developer in Test   November 2023 – June 2024

- Automated software testing using Selenium with Python to enhance functionality and usability, working closely with the Software Engineering team to launch multiple B2C and B2B brands.

Quality Assurance Engineer Level 1   Febraury 2022 – June 2024

- Led the launch of WiZR's new business module for education and upskilling, automating website testing with Selenium and Python, and implementing efficient bug reporting.
- Managed a process re-engineering project, streamlining end-to-end service workflows across 10 departments and reducing manual tasks by 60% using Salesforce Loan Management System (LMS).

Quality Assurance Engineer Intern   September 2021 – January 2022

- Mastered business functions through Business As Usual (BAU) module, emphasizing software testing, analysis, and reporting via JIRA and contributing to the company's upskilling culture.
- Improved workflow efficiency by 25% by performing lead-generation process on automation with company's in-house Loan Management System (LMS) using Selenium with Java.

ACTIVITIES

Pace University Data Science Club, Member   October 2024

LANGUAGES

Hindi, Punjabi