SIDDHARTH HAVELIWALA

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EDUCATION

University at Buffalo, The State University of New York **08/23 – 05/25**
Master of Science in Industrial and Systems Engineering (focused in Data Analytics) *Buffalo, New York*

Malaviya National Institute of Technology **07/13 – 05/17**
Bachelor of Technology in Computer Science and Engineering *Jaipur, Rajasthan*

EXPERIENCE

University At Buffalo, The State University Of New York **01/24 – Current**
Research Assistant *Buffalo, New York*

- Collaborating with Data, Decision and Risk Lab in Department of Industrial Engineering, other institutions and various stakeholders on SENTRY project to enhance school security by optimizing patrolling strategies using Bayesian Stackelberg model and developing GUIs.
- Devised optimization model by analyzing current strategies and student traffic on campus. Employing Open Street Maps (OSM) API data for building real-world simulation to test the model utilizing SciPy and SimPy libraries in Python.

Accenture **12/21 – 07/23**
Application Development Analyst *Bengaluru, Karnataka*

- Designed and developed numerous Accenture visualization SynOps applications for AI-powered automated reporting & analytics. Upheld the design and maintenance of dashboards, empowering advanced data analysis and predictive modeling to optimize and forecast client businesses.
- Assembled a Hadoop-based distributed system for client operational data, optimizing reporting efficiency by 50%, and utilized MongoDB for real-time storage and data retrieval, enabling faster decision-making.
- Implemented large-scale data migration projects including reporting shift from Microsoft SSRS to PowerBI tool and platform transition from MS SQL Server to Google BigQuery.
- Resolved more than 250 ServiceNow incidents for data issues on AWS and GCP with consistent 100% accuracy and within minimal SLAs. Improved query response time in SSIS by more than 40% in most cases by performance enhancement.

CRG Solutions Private Ltd. **06/21 – 09/21**
Data Analyst *Mumbai, Maharashtra*

- Automated ETL process using SSIS and constructed interactive dashboards using PowerBI for a banking institutional client to enhance the business for vehicle and mortgage loans.

Intellect Design Arena **06/17 – 08/19**
Product Engineer *Chennai, Tamil Nadu*

- Led daily operations involving the development of the Data Warehouse (DWH) and implemented various performance enhancements for routine DWH loads for client applications based on AWS platform and SQL Server.
- Devised and executed SQL stored procedures, views, triggers, functions, common table expressions (CTE) and complex queries on MS SQL Server 2012/2014/2016 for DWH development.
- Taken initiative to maximize data accuracy and quality (above 95%) between DWH layers utilizing automation of DWH reconciliation, performance improvements and generating a report of results once per day.
- Received Intellect Spot award for excellent client communication and timely project deliveries.

PROJECTS

Predicting IPO Performance | *Python, Bayesian Optimization, Neural Network*

- Built statistical machine learning models to predict Initial Public Offering (IPO) gain or loss performance on day of listing. With Bayesian optimization, CatBoost and Neural Network models resulted in a validation accuracy of 82.5%.

Music Genre Recommendation | *Machine Learning, K-means Clustering, CatBoost*

- Achieved multi-class classification of music genres for Spotify data to generate and recommend user curated playlists based on genres with validation accuracy of 71% and training accuracy of 90% using K-means clustering and CatBoost model.

Forecasting Impact of Solar Flares on Earth | *Time Series Analysis, R, ARIMA, VAR*

- Predicted high intensity solar flares impacting earth's atmosphere using SWAN-SF dataset and performing exploratory data analysis (EDA) on it such as exponential smoothing, feature engineering to fit ARIMA and Vector Auto Regression (VAR) models.

Adaptive Gait Rehabilitation and Recovery | *Reinforcement Learning, Python, PPO, Algae method*

- Designed state of the art adaptive gait rehabilitation technique by fusing reinforcement learning method Proximal Policy Optimization (PPO) with Algae genetic algorithm to improve gait among various stakeholders by optimizing gait metrics such as optimal shift of Normalized Auto-Correlation(NAC) values and SHAP analysis.

RELEVANT COURSEWORK

Statistical Machine Learning, Predictive Modeling and Data Analytics, Deep Learning, Reinforcement Learning, Time Series Analysis, Business Intelligence, Game Theory, Database Management, Object Oriented Programming, Project Management & Stochastic Methods.

SKILLS

Languages: R, Python, SQL, C, HTML/CSS, Java, JavaScript
Developer Tools: GCP, AWS, Apache Subversion (SVN), VS Code, Jupyter Notebook
Python Libraries: Numpy, Pandas, Tensorflow, PyTorch, Scikit-Learn, Flask, Matplotlib, Seaborn, SimPy, SciPy
Database Management: SQL Server 2012/14/16, BigQuery, MySQL, Excel
Technologies/Frameworks: MSBI Tools (SSIS/SSRS/SSAS), PowerBI, Tableau, Linux, GitHub, BitBucket