Kanchan Kalunge

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Work Experience

Senior Data Scientist, Pitney Bowes. *January 2019 - Present*

Volume Forecast

- Proficiently conducted requirement elicitation sessions with stakeholders to effectively gather and document their needs and expectations.
- Played a key role in the design and development of a machine learning system for parcel volume forecast utilized for planning logistics and warehouse operations efficiently. Reduced mean absolute forecast error by 40% over existing approach
- Designed and developed a comprehensive forecast analysis framework to generate weekly model performance reports, detecting data drift and anomalies for effective data-driven decision-making.

Estimate Delivery Date

- Spearheaded the development of a Machine learning solution to Estimate Delivery Date
- Leading a team of 3 Data Scientists for further improvement and maintenance of an EDD solution
- Enhanced system accuracy to 88% and Reduced model training time by 80%
- Successfully automated model training process through Continuous Integration/Continuous Deployment (CICD) pipelines, resulting in improved efficiency and accuracy of model deployment

Warehouse Optimization

- Designed and implemented a machine learning-driven alert system to detect near-full warehouse sacks.
- Implemented a data-driven statistical model to enhance product placement, resulting significant 60% reduction in picker path distance.
- Optimized assignment of sorting bins and postal codes using Operations research which reduced the manual efforts of replacing and moving the warehouse sacks to the shipping area by 60%-65%.

Key roles and Other Projects

- Successfully mentored and guided data science interns to develop their technical skills and professional growth.
- Assist stakeholders in identifying clients at risk by performing data analysis and preparing reports
- Proficient in conducting regular analysis of model performance, I adeptly prepare and present comprehensive weekly reports to stakeholders and product managers.
- Successfully sustained a machine learning fraud detection model through continuous monitoring, analysis, and improvement.
- Contributed to the development of anomaly detection by devising an effective ensemble outlier detection approach, incorporating Mahalanobis distance, z-test, and isolation forest.

Skills

Core	Machine Learning, Deep Learning, Computer Vision, Data Science
	Statistical Inference, Statistical modeling, Data analysis, Data Mining, Time Series Forecasting
Programming	Python, SQL, R
Libraries	NumPy, pandas, scikit-learn, PyTorch, TensorFlow, Matplotlib, Plotly, Dash

Education

M. Sc. Industrial Mathematics and Computer Applications (8/10) *July 2016 - June 2019*
Department of Mathematics, SPPU, Pune.

B.Sc Mathematics (8.4/10) *July 2013 - June 2016*
Fergusson College, Pune.

Interests

- Passionate about exploring data and uncovering insights through visualization techniques, with a keen eye for identifying patterns and trends that can drive informed decision-making.

- I worked as a fellow for Pune-based NGO, Science For All Foundation's Science Education Initiative (SEI). I taught maths and science, and designed lesson plans and assessments for students in public school.

- I am an avid cyclist and enjoy exploring new trails on my bike. Additionally, I find hiking to be a great way to unwind and connect with nature. In my downtime, I also enjoy reading a variety of books.