Bhavneet Bali

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EXPERIENCE

•National Centre for Aerospace Innovation and Research, IIT Bombay *07/2023-Present*
Project Research Assistant Mumbai

– Building and working on innovative solutions for industry projects using Machine Learning
– Assisting with course material for an online course on Machine Learning

•PricewaterhouseCoopers (PwC) *05/2022-07/2022*
Financial Services Tech Consultant Mumbai

– Built Android App for an e-commerce platform demonstrating the use of headless CMS
– Engineered the UI for a bank login website with Flutter and Dart

EDUCATION

•Veermata Jijabai Technological Institute *2023*
Bachelor of Technology, Mechanical Engineering CGPA: 6.89

PERSONAL PROJECTS

•Flow Field Reconstruction Using Optimal Sensor Placement and Deep Learning *Jan 2023-Present*

– Modelled a feed-forward neural network to learn the relationship between sensor measurements and the reduced-order state of the system.

•California Housing Prices Prediction

– Extracted data from Statlib Repository for housing prices in state of California
– Performed EDA, Engineered new features and regressed house prices as a function of geographical and demographic features along with new engineered features.
– Built Linear Regression, DecisionTreeRegressor, RandomForestRegressor and SupportVectorRegressor models. RandomForestRegressor performed the best with an RMSE of \$50,435.

•MNIST Digits Classifier

– Performed binary (5 vs not 5) and multi-class classification with 10 digits using the MNIST dataset
– Created a multilabel model to classify an instance of image with labels *is odd* and *is greater than 7*
– Used SGDClassifier, RandomForestClassifier, SupportVectorClassifier, KNearestNeighboursClassifier for the above tasks. Attained an accuracy of 97.64% for multilabel classifier with KNN and 90% for multiclass classifier with SGDClassifier.

•Data Exploration with SQL

– Extracted, wrangled & cleaned data in a publically available housing prices dataset.
– Performed missing value imputation, address split, column standardization, duplicate removal, dropping unused columns to wrangle and draw insights from the data.

•COVID-19 Data Understanding with SQL

– Performed CRUD operations for populated tables from xlsx format
– Wrote queries to find topk, bottomk, totals, averages etc. of different fields in the table and used CTEs / TempTables and created/stored views

PUBLICATION

Flow Field Reconstruction *22/10/2023*

Bhavneet Bali and Mandar Tendolkar, "Flow Field Reconstruction using Optimal Sensor Placement and Deep Learning", In: Satyasai Jagannath Nanda and Rajendra Prasad Yadav (eds), Data Science and Intelligent Computing Techniques, SCRS, India, 2023, pp. 499-508. https://doi.org/10.56155/978-81-955020-2-8-46

TECHNICAL SKILLS AND INTERESTS

Languages: C++, Python, SQL
Developer Tools: Microsoft Office
Frameworks: Tableau, Microsoft Excel, Microsoft Word
Areas of Interest: Machine Learning, Deep Learning, Data Engineering, Data Wrangling, Data Analytics, Web Scraping

ACHIEVEMENTS

•HSC (2019): Figured in top 1 percentile of all scorers *2019*

•Enthusia, VJTI: Founder, E-Sports Division, Enthusia SportsFest *2021*

•IYMC, Lucknow: Bronze, International Mathematics Convention in solo and group competitions *2017*

•Sepak Takraw: State Level representation in the sport Sepak Takraw, selected for National Trials *2017*