Ashendra Sharma

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Education

Madhav Institute of Technology and Science, Gwalior **September 2020 – May 2024**
Bachelor of Technology in Internet of Things *CGPA (till 5th Sem) : 8.01*

Relevant Coursework

- Data Structures
- Cloud Computing
- Algorithms
- Database Management
- AI/ML
- Data Sciences in IoT
- Object Oriented Programming
- Soft Computing
- Machine Learning Specialization in Trading.
- Operating System

Technical Experience

Research Intern **July 2023 – September 2023**
Under the Guidance of Dr. Dhananjay Bisen, Professor, IT, MITS, *Gwalior,MP*

- Executed an independent project in machine learning for quantitative finance, demonstrating proficiency in research methodology design, including thorough data collection, data pre-processing, and model development.
- Explored the hybrid LSTM-ARIMA model's effectiveness in stock forecasting, outperforming standalone LSTM and ARIMA models with a lower MSE of 3.27, showcasing its potential in capturing complex market dynamics.

Basic course on Internet of Things - LEVEL 2 **June 2023 – July 2023**
by TIH Foundation for IoT & IoE, IIT BOMBAY *Mumbai*

- Programmed STM32 microcontrollers with ARM Cortex M4 processors, employing KEIL Studio and STMcube IDE.
- Gained hands-on experience with Advanced IoT and Data Analysis, including regression models and time-series data analysis, Technologies: BLE protocol stack, GATT attributes, AI/ML for IoT, and mobile app development.

Research trainee (Medical applications) **July 2023 – October 2023**
Under the Guidance of Dr. Arun Kumar Wadhwani, Professor, EED, MITS *Gwalior, MP*

- Developed a bone fracture detection model using X-ray images with wavelet-based segmentation and a backpropagation neural network for classification, while extensively utilizing the laboratory's X-ray machine for data acquisition.
- Proficiently operated diverse biomedical instruments to capture physiological data, encompassing blood pressure, ECG, EEG, EMG, and more. Employed advanced Machine Learning algorithms for subject-specific parameter classification and analysis in the laboratory.

Personal Projects

Botanical Iris Classification | *Decision tree, k-means, sci-kit-learn, Logistic Regression, SVM, Metrics* **October 2023**

- Created an Iris flower classification project in Python with Scikit-learn, using various algorithms for categorization based on petal and sepal measurements, including data preprocessing, model training, and performance evaluation.
- Model accuracies: 92.1% (Decision Tree) to 94.7% (Logistic Regression, SVM, Naive Bayes, KNN) for Iris classification.

Customer-Segmentation—Using-k-means | *Python, k-means, Scikit-learn, Pandas, Matplotlib/Seaborn* **January 2023**

- Implemented data-driven clustering model on a dataset of 200 customers with 4 key features, identifying and defining 5 distinct customer segments. This initiative drove targeted marketing and improved customer engagement.
- Used insights for 15% higher marketing effectiveness, 10% improved customer retention, and increased profitability.

Stock Price Prediction Using Machine Learning | *Python, LSTM-RNN, Scikit-learn, keras* **June 2022**

- An accurate Stock Price Prediction model was achieved using LSTM-RNN with low MSE (0.577) and RMSE (0.759).
- Leveraged expertise in data analysis, machine learning, and financial modelling with the Apple dataset sourced from Yahoo Finance (2012-2022), employing MinMaxScaler and LSTM-based neural networks.

Technical Skills

Languages: C/C++, Python, SQL, Embedded C.
Software & Tools : Visual Studio Code, Jupyter Notebooks, Google Colab, Microsoft Office, Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, TensorFlow, CNN, LSTM-RNN, ARIMA, Gradient Boost, SVM, Random Forest, Hadoop, Spark etc.
Technical Skills: Data Analytics, Quantitative Analytics, Machine Learning, Time Series Modelling, Finance Modelling Soft, Statistical Modelling, computing Techniques, Natural Language Processing, DBMS.

Achievements

Stock Forecasting Using LSTM-ARIMA Hybrid Model **July 2023 – October 2023**
Ongoing *Annals of Data Science*

- Published the research paper in the field of stock market forecasting, Showcasing robust research and analytical abilities.

Asimov Robotics Club **June 2022 – October 2023**
Vice President *MITS*

- Organized event planning and Led a 30-member executive board, and 100+ member chapter to achieve community service, academic, and unity goals.