Krishna Mallik Nanduri

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Portfolio

EDUCATION

Northeastern University, Boston, MA

Master of Science in Data Science

Sept 2021 - Aug 2023

CGPA: 3.8/4.0

• Coursework: Supervised Machine Learning, Unsupervised Machine Learning and Data Mining, Intro to Data Management, Data Management for Analytics, Parallel Processing for Data Analytics, Algorithms.

▶ Gandhi Institute of Technology and Management University, India

Jun 2017 - Jun 2021

Bachelor of Technology in Computer Science and Engineering

CGPA: 3.75/4.0

SKILLS

Programming: Python, SQL, Pyspark, R, C, C++, Java, JavaScript

Libraries: Pandas, NumPy, Scikit-learn, Seaborn, Matplotlib, NLTK, ggplot, dplyr, gensim, spaCy,media pipe, OpenCV Software/Tools: Tableau, PowerBI, Microsoft Office, Docker, Git, Unix, JMP, SAS, AWS (EC2, RDS, SageMaker, Athena)

Database Systems: AWS RDS, MySQL, IBM DB2, OracleDB, MongoDB

Big Data Technologies: Hadoop, Hive, Apache Kafka, Airflow, Apache Spark, MapReduce

Cloud Technologies: GCP (Vertex AI, Tensorflow), AWS, Azure Databricks

WORK EXPERIENCE

Via Separations, Watertown, MA USA

 ${
m May} \ 2022 - {
m Dec} \ 2022$

Machine Learning Engineer Co-op

"Neural Networks, Predictive Modeling"

- Implemented MLops practices by developing a powerful ML pipeline on AWS Sagemaker, employing TCN, and LSTM for deep learning and Time Series Analysis (ARIMA, SARIMA) on the sensor data stream, resulting in a 60% accuracy boost for product maintenance forecasts.
- Collaborated with cross-functional teams to migrate 1 TB of diverse Excel-based data to an optimized AWS RDS Relational database on AWS EC2, utilizing MySQL, resulting in a 35% reduction in product experimentation data retrieval time
 Spearheaded front-end development with Retool and JavaScript, achieving a 40% reduction in data analysis time, seamlessly integrated the
- front-end system with AWS database using **SQL Queries**, stored procedures, views, functions.
- Employed SAS JMP for statistical analysis to optimize data normalization for membrane form factor experiments, facilitating precise cross-comparisons and improving experimentation efficiency, resulting in a 20% reduction in analysis time
- Enhanced data integrity by 40% via automated vendor purchase order processing using Google Cloud Platform (GCP) APIs, optimizing data ingestion with Python-based Bash scripts. Integrated Git version control and CI/CD pipelines with Jenkins.
- Developed A/B tests and experiments to assess the effects of varied product testing parameters. Utilized statistical analysis to drive data-informed process improvements in the product performance

Bluebonnet Data, Minneapolis, MN, USA

Jan 2022 - May 2022

Data Analyst Intern

 $"Complex \ Visualizations, \ Clustering, \ Geospatial \ Analysis"$

- Developed **Tableau** and **Power BI** dashboards integrating trends and patterns from behavior analysis, providing stakeholders with real-time insights, improving the accuracy of decision-making by 30%, streamlining campaign strategies
- Engineered automated data pipelines using Databricks to extract, transform and load (ETL) USA census data with Minneapolis' 159 precincts voter data for voter behavior analysis, resulted in 70% reduction in data processing time
- Utilized **ArcGIS** and **QGIS**, **Geopandas** for geospatial analysis, creating plots to visualize voter sentiment metrics in various precincts. Analyzed voter behavior patterns and preferences, optimizing campaign strategies.
- Employed **K-means clustering** for cluster analysis to identify five distinct behavior groups, effectively categorizing voter demographics, optimizing outreach methods, resulting in a 20% increase in voter engagement effectiveness

Verzeo (Microsoft Authorized Education Partner), Hyderabad, India

Jan 2021 – Jun 2021

Data Science Intern

"PySpark, Parallel Processing"

- Utilized a diverse range of machine learning and deep learning models, including the **Random Forest Regressor**, **XGBoost** for ensemble learning, and **LSTM** as a recurrent neural network (RNN), for accurate time series forecasting
- o Optimized LSTM model for a significant 45% reduction in SMAPE, improving microbusiness density forecasting performance
- Employed **Apache Spark**, along with **MapReduce** and **Hadoop**, to streamline big data processing and conduct exploratory data analysis (EDA), achieving a significant 65% decrease in processing time compared to traditional Python methods
- Implemented feature engineering techniques (lag features, rolling statistics, exponential smoothing) and performed **Principal Component Analysis** (**PCA**) for dimensionality reduction, resulting in a reduction of data noise by 10%

Projects

• Energy Consumption Prediction | •

"Boosting Techniques, Feature Engineering"

- Used **XGBoost**, **LGBM**, and **CATBoost** ensemble models with feature engineering, Bayesian Optimization, and Halving Grid Search to predict HVAC energy consumption from a 40M-record dataset, achieving 1.27 RMSLE.
- Mental Health Analysis on Social Media Posts | 🗘

"Natural Language Processing"

• Applied **NLP** techniques and deep learning models to analyze and cluster Reddit posts, predicting suicide risk at 80% accuracy using feature extraction methods such as **TF-IDF** and **Word2Vec**.

• Healthcare Chatbot Using LLMs on GCP

"Large Language Models, Google Cloud"

- Developed a healthcare chatbot with LLMs on **GCP**, integrating **dbt** and **GraphQL** for seamless data workflows, ensuring real-time medical guidance and information delivery.
- Diabetic Retinopathy Identification Project
 - Enhanced detection with **OpenCV** preprocessing and **CNN** developed in **Keras** & **TensorFlow**, leveraging deep learning for efficient medical image classification and analysis.