## Kavitha Lakshmi Matta

**Email:** [kavithalakshmimatta28@gmail.com](mailto:kavithalakshmimatta28@gmail.com)

## Mobile: 7095713128 OBJECTIVE:

Machine Learning Engineer with expertise in designing, training, and deploying scalable machine learning models, leveraging tools like Python, Scikit-learn, and LLMs to solve complex, real-world problems. Team oriented, self- motivated, and proven technical expertise to better enhance the possibility of self-nurture and contribute to company’s growth.

# CAREER SUMMARY:

I have 1.6 years of experience in developing predictive models using Python and Scikit-learn. Skilled in data cleaning, data preprocessing, model training, and evaluation. Hands-on experience with natural language processing (NLP), Model Context Protocol (MCP), and large language models (LLMs).

# SUMMARY PROFESSIONAL:

Machine Learning Engineer Evalueserve, Bangalore

Jan 2024 – Present

* 1.6 years of hands-on experience as a Machine Learning Engineer building AI/ML solutions using Python and Scikit-learn.
* Having hands-on experience in time series forecasting, data cleaning, feature engineering, model training, evaluation, and optimization.
* Having practical experience in natural language processing (NLP), including text preprocessing and tokenization.
* Hands-on experience with Model Context Protocol (MCP) and integrating large language models (LLMs) into intelligent applications.
* Having strong technical proficiency with Python, Scikit-learn, Pandas, and NumPy.
* Having hands-on experience in data visualization using Matplotlib, Seaborn, and Power BI to deliver actionable business insights.
* Having experience with tools such as Jupyter Notebook, Visual Studio Code (VS Code), and Git for workflow management, reproducibility, and collaboration.

# TECHNICAL SKILLS:

Programming & Scripting: Python, MATLAB Data Handling & Analysis: Pandas, NumPy

Data Visualization: Matplotlib, Seaborn, Power BI Databases: MongoDB, SQL

Tools & Environments: Jupyter Notebook, Visual Studio Code (VS Code), Git Workflow & Techniques: Exploratory Data Analysis (EDA), KPI Tracking and Metrics.

# EDUCATION:

**PhD** in **Statistical Signal Processing**, Koneru Lakshmaiah Education Foundation (KLEF), Guntur (2017-2023).

**M. Tech** in **Computer Science and Engineering** from NRI Institute of Technology, Affiliated to JNTU University Kakinada (2013-2015).

# PROJECTS:

## Retail Banking KPI & Trend Analysis

**Environment:** Python, Pandas, NumPy, Matplotlib, Seaborn

## Responsibilities:

* Conducted in-depth analysis of multi-year French retail banking data to identify trends in key performance indicators including interest margins, total revenue, and product performance.
* Cleaned and merged large, complex datasets using Pandas and NumPy while handling null values, duplicates, and data type inconsistencies.
* Performed exploratory data analysis (EDA) to track changes in financial indicators and uncover business- critical patterns.
* Created data visualizations such as line plots, heatmaps, and categorical comparisons using Matplotlib and Seaborn.
* Delivered actionable insights that directly contributed to forecasting and strategic reporting across banking products.

**Auto-Tagging System for Hierarchical Multi-Label Classification Environment:** Python, Scikit-learn, Pandas, NumPy **Responsibilities:**

* Designed and implemented a multi-label classification system to automate hierarchical tagging of article content, covering 33 top-level and 263 sub-level categories.
* Utilized Scikit-learn for model development and NLP-based feature extraction, applying preprocessing techniques to support accurate tag prediction.
* Updated and replaced outdated top-level and second-level tag names with a new taxonomy to reflect current content structures.
* Handled special characters in tag names and ensured accurate mapping between child and parent tags to preserve classification integrity.
* Refined the tagging logic to use "Other" only when no relevant tag from a specific group could be identified, improving tag specificity and output relevance.
* Achieved 62% classification accuracy and reduced manual tagging effort by 50%.

## GenAI-Driven Forecasting and Q&A System with MCP Integration

**Environment:** Python, ARIMA, Pandas, NumPy, MongoDB, Model Context Protocol (MCP), LLM APIs

## Responsibilities:

* Used ARIMA models to forecast macroeconomic indicators for 16 countries based on historical data trends.
* Integrated a custom-built Model Context Protocol (MCP) to connect time series outputs with LLM-based querying, enabling interactive insights.
* Leveraged MongoDB to manage historical and predicted data with fallback logic for structured query responses.
* Applied Pandas and NumPy for data transformation, feature engineering, and formatting time series input data.
* Enabled seamless communication between predictive models and LLMs, enhancing the accessibility and interpretability of forecasting results.