

NIVETHINI SETHILSELVAN

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EDUCATION

Northeastern University - Master of Professional Studies in Applied Machine Intelligence (GPA – 3.9/4.0) Key courses: Data Mining, AI Communication and Visualization, ML Operations, Business Intelligence.	Boston, MA Aug 2026
Anna University - Bachelor of Technology in Information Technology (CGPA – 9.1/10) Key courses: Probability and Statistics, DBMS, Python, Java, OOPS, Data Structures, Supply Chain Management.	Chennai, IN May 2022

PROFESSIONAL EXPERIENCE

Mutlicoreware/Uhnder Pvt Ltd <i>Software Engineer</i>	Chennai, IN Jun 2022 – Jul 2024
<ul style="list-style-type: none">Developed a Performance Analysis Dashboard for CPU, RAM, DSP, and ACP usage, integrating SQL for data retrieval and processing real-time live data, leveraging Matplotlib and Seaborn for dynamic visualization.Engineered a Peer's KPI Metrics Dashboard to track bug metrics, test case execution, and automation coverage. Optimized data extraction with SQL, automated preprocessing with Python, and enabled real-time visualization in Grafana.Automated Radar performance data collection and integration with SQL, developed a Flask-based dashboard for real-time visualization, identifying 25% more undetected bugs across releases.	
Mutlicoreware/Uhnder Pvt Ltd <i>Intern - Software</i>	Chennai, IN Sept 2021 – May 2022
<ul style="list-style-type: none">Developed a Python Auto-Mail Trigger Script to identify MISRA-C++ violations in Git commits.Developed a Hardware Inventory Dashboard using Python/Flask to display radar details and its current operational state.	

PROJECTS

CPS-AI Assistant (Northeastern University) RAG Vector DB OLLAMA Groq Streamlit (Github)	Feb 2025
<ul style="list-style-type: none">RAG-Powered Chatbot – Built an AI chatbot using Retrieval-Augmented Generation (RAG) for precise, context-aware student queries.Efficient Vector Search – Implemented Ollama embeddings with Supabase vector DB for fast, accurate semantic retrieval.Scalable AI UI – Developed a Streamlit-based interface with real-time responses via Groq's LLAMA 3.3 70B model.	
Predictive Analytics for High-Value Customer Churn in the Telecom Sector EDA & Machine Learning (Github)	Jul 2024
<ul style="list-style-type: none">Developed a machine learning pipeline leveraging logistic regression and decision tree classifiers to predict customer churn for high-value telecom subscribers using monthly usage data.Feature Engineering & Dimensionality Reduction: Applied PCA and advanced feature extraction techniques to optimize model performance and reduce dimensional complexity, handling class imbalance using SMOTE.Identified key churn indicators like call volume, data usage, and recharge frequency for retention strategies.	
Customer Segmentation and Lead Scoring System for Predicting Lead Conversion EDA & Logistic Regression (Github)	Jun 2024
<ul style="list-style-type: none">Engineered a logistic regression model with feature selection and regularization techniques (L1/L2) to predict lead conversion probability, optimizing resource allocation for sales teams.Conducted data cleaning, outlier treatment, and encoding (one-hot/label) to ensure model robustness.Implemented cross-validation, ROC-AUC analysis, and hyperparameter tuning to achieve a predictive accuracy of 80% for lead scoring, streamlining lead prioritization and enhancing sales effectiveness.	
SQL-Driven Insights for Optimizing Global Movie Release Strategy - Insights for RSVP Movies (Github)	Mar 2024
<ul style="list-style-type: none">Applied advanced SQL techniques such as complex JOINS, subqueries, and window functions (e.g., ROW_NUMBER(), RANK()) to analyze and rank global movie performance based on revenue, genre, and audience demographics.Utilized CTEs and nested queries for dynamic aggregation, trend analysis, and identifying relationships between budget, cast, and box office success across different regions.Employed advanced filtering and aggregation with GROUP BY, HAVING, and CASE WHEN statements to uncover insights into movie language, cast impact, and budget allocation, optimizing strategies for global releases.	

TECHNICAL SKILLS

Programming Languages: Python (Pandas, NumPy, Matplotlib, Scikit-learn, Seaborn, TensorFlow, PyTorch), Java, SQL.
Data Science and ML: Regression, Classification, Decision Trees, SVM, Clustering, Neural Networks, NLP, LLM.
Data Analytical Tools: Tableau, Power BI, MS Excel (VLOOKUP, Pivot Tables, VBA), Jupyter Notebooks, Google Analytics.
Data Warehouse Tools: MySQL, MSSQL Server, GCP, AWS (S3, EC2), Snowflake, ETL, Airflow, Kubernetes, Docker.
Other Tools and OS: Jira, Confluence, Git, Agile, Kafka, MS PowerPoint, MS Word, Microsoft Office Suite, Windows, Linux.