NIVETHINI SENTHILSELVAN

+1 (617) 206 0530 | senthilselvan.n@northeastern.edu | linkedin-nivethini-senthilselvan| GitHub | Tableau | Portfolio

EDUCATION

Northeastern University - Master of Professional Studies in Applied Machine Intelligence (GPA – 3.9/4.0) **Boston, MA**
Key courses: Data Mining, AI Communication and Visualization, ML Operations, Business Intelligence. Aug 2026

Anna University - Bachelor of Technology in Information Technology (CGPA – 9.1/10) **Chennai, IN**
Key courses: Probability and Statistics, DBMS, Python, Java, OOPS, Data Structures, Supply Chain Management. May 2022

PROFESSIONAL EXPERIENCE

Mutlicoreware/Uhnder Pvt Ltd **Chennai, IN**
Software Engineer Jun 2022 – Jul 2024

- Contributed to the ADAS system tracker perception module to increase the dynamic target detection accuracy.
- Learned and implemented the concept of MPU [Memory Protection Unit] allocations in the flash memory for efficient and functional safety use of radar applications.
- Brainstormed and Engineered a Python framework to inject errors and check the error-handling mechanism of the ADAS system.
- Programmed and optimized almost 65% of the Python scripts that check the data received from the radar to ensure data integrity.

Mutlicoreware/Uhnder Pvt Ltd **Chennai, IN**
Intern - Software Sept 2021 – May 2022

- Acquired knowledge about Automobile Radar Applications in a real-time environment.
- Developed auto-mail trigger scripts using python

PROJECTS

Predictive Analytics for High-Value Customer Churn in the Telecom Sector Using Machine Learning (Github) **Jul 2024**

- 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 Using Logistic Regression(Github) **Jun 2024**

- 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.

Demand Prediction for Shared Bike Rentals Using Multiple Linear Regression (Github) **May 2024**

- **Developed a Multiple Linear Regression** Model to predict shared bike demand using key predictors like weather, season, and user demographics, leveraging Python's sklearn library.
- Performed **Data Preprocessing** including handling categorical variables, feature engineering, and scaling to optimize model accuracy and interpretability.
- Evaluated **Model Performance using R-squared** and residual analysis, ensuring robust predictions for actionable insights to drive revenue growth post-COVID-19.

SQL-Driven Insights for Optimizing Global Movie Release Strategy - Insights for RSVP Movies (Github) **Mar 2024**

- **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, R.
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.