Name: Arveti Vinutha

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Professional Summary

Detail-oriented and analytically driven Data Science enthusiast with a strong foundation in Python, Machine Learning, and Statistical Modeling. Skilled in handling structured and unstructured data, building predictive models, and generating insights to support datadriven decision-making. Passionate about applying analytics and AI in the **Insurance domain** to improve claim prediction, risk assessment, and customer retention.

Core Competencies

- Machine Learning & Predictive Modeling
- Python (Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn)
- Data Visualization (Power BI, Tableau)
- SQL & Data Manipulation
- Statistical Analysis & Hypothesis Testing
- Feature Engineering & Model Evaluation
- Insurance Claims Analytics & Risk Scoring
- Natural Language Processing (NLP)

Academic Background

Bachelor of Technology in Computer Science and Engineering (Data Science)
Santhiram Engineering College, Nandyal, Andhra Pradesh — 2025

- Coursework: Data Mining, Statistics, Probability, Machine Learning, Database Management, Artificial Intelligence **Certifications:**
  - NPTEL – Introduction to Machine Learning
  - **HackerRank Certifications:** SQL (Basic), SQL (Intermediate)

Academic Projects

1. Insurance Claim Prediction Using Machine Learning

Python, Scikit-learn, Pandas, Power BI

- Built a classification model to predict fraudulent insurance claims using Random Forest and Logistic Regression.
- Achieved **92% model accuracy** with hyperparameter tuning and feature selection.
- Used Power BI to visualize KPIs such as claim amount distribution, fraud ratio by region, and claim trends over time.

- Automated data preprocessing using Python scripts, improving processing efficiency by 40%.

2. Customer Risk Profiling for Health Insurance *Python, SQL, Tableau*

- Segmented customers into low-, medium-, and high-risk groups based on claim history, age, and health conditions.
- Implemented K-Means clustering and regression analysis for risk scoring and policy pricing optimization.
- Delivered interactive dashboards showcasing churn likelihood and claim probability insights.

3. Predictive Analytics for Vehicle Insurance Renewal

R, Excel, Power BI

- Developed a logistic regression model predicting renewal probability using customer engagement and claim frequency.
- Increased accuracy by 15% after applying feature scaling and correlation analysis.
- Designed Power BI dashboards for management to identify high-value customer segments.

Technical Skills

Programming: Python, R, SQL, DAX, Power Query

Libraries: NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn, TensorFlow (Basic)

Databases: MySQL, SQL Server, PostgreSQL

Visualization Tools: Power BI, Tableau, Matplotlib, Excel

Version Control: Git, GitHub

Internships

AIMERS – Artificial Intelligence Intern *Duration:*
June 2024 – August 2024

- Supported the data analytics team in processing claim data and preparing trend reports using SQL and Power BI.
- Assisted in anomaly detection for fraudulent claim analysis using classification models.
- Improved data reporting efficiency by 25% through automated dashboards.

Achievements

- Participated in the NASSCOM FutureSkills Data Science Hackathon and gained hands-on experience working on a real-world challenge.
- Published research paper on **"Machine Learning-Based Chatbot System"** in the *International Conference on Research and Development in Information, Communication and Computing Technologies (ICRDICCT'25).*