

# VINOD BAVAGE

## DATA SCIENTIST

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### SUMMARY

AI & ML Engineering Graduate with hands-on Data Scientist internship experience, spanning the full ML lifecycle. Expertise in Deep Learning, model optimization, and evaluation. Highly proficient in Python and SQL to deliver data-driven business solutions.

### SKILLS

#### Programming & Querying: Python, SQL

**Libraries:** Pandas, Numpy, Scikit-learn, TensorFlow, Keras, Matplotlib, Seaborn

**Concepts:** Machine Learning, Deep Learning, Feature Engineering, Model Evaluation, Data Visualization, Data Cleaning, Statistical Analysis

### EXPERIENCE

#### Data Science Intern

April 2025 – December 2025

*Rubixe - AI Solutions Company*

- Analyzed an extensive 45K-record SQL-sourced ITSM dataset to model and predict High Priority Incidents and Request for Change (RFC) failures.
- Developed and deployed robust machine learning and statistical models, including XGBoost, Random Forest, SMOTE, and Exponential Smoothing, managed via Scikit-learn Pipelines.
- Improved key performance metrics across all models, achieving 96% accuracy for Priority Prediction, 75% accuracy for Department Auto-Tagging, and 98% Test F1-score for RFC Failure Prediction.
- Generated significant business value by automating ticket triage, eliminating data leakage and model instability, and providing reliable incident volume forecasts for proactive resource allocation.

### PROJECTS

#### Rice Leaf Disease Detection

June 2025 - August 2025

- Developed an advanced CNN classifier to accurately identify three major rice leaf diseases from raw image data.
- Engineered the core solution using Transfer Learning (MobileNetV2) architecture, Stratified K-Fold Cross-Validation, and aggressive Data Augmentation for superior model generalization.
- Optimized overall model performance, achieving an 84.06% Average Validation Accuracy and utilizing regularization to significantly mitigate overfitting risks.
- Deployed a scalable solution for early disease detection, enabling farmers to implement timely interventions to safeguard crop yield and support Precision Agriculture efforts.

#### PUBG – Game Winner Prediction

August 2025 - October 2025

- Modeled and predicted competitive game outcomes by analyzing a 4.4M-record PUBG dataset, utilizing EDA and advanced Feature Engineering for data preparation.
- Developed and deployed a high-performance XGBoost Regressor by comparing ensemble models and applying RandomizedSearchCV and ColumnTransformer techniques.
- Improved predictive accuracy significantly, achieving a superior  $R^2$  of 0.9334 and low RMSE of 0.0791 with the production model, validating performance across five different algorithms.
- Delivered a production-ready system and actionable Strategic Insights that enable data-driven player strategy and provide the business with a fast, high-accuracy tool for match forecasting.

#### House Price Prediction

November 2025 - December 2025

- Engineered a robust predictive model for house sale price using comprehensive EDA and advanced feature engineering.
- Leveraged Python's ML stack (XGBoost, Ridge) and SHAP analysis to identify key price drivers for model interpretability.
- Enhanced model via hyperparameter tuning, achieving a competitive predictive RMSE of 0.0190.
- Provided actionable business value by providing strategic buyer recommendations based on critical feature influence.

### EDUCATION

#### B.E. in Artificial Intelligence and Machine Learning

Graduated: 2025

*Bheemanna Khandre Institute of Technology, Bhalki (2021–2025)*