**Housing Price Prediction Project - Meeting Log**

**Date:** March 15, 2025 **Phase:** Advanced AI/ML Models Presentations **Focus:** Machine Learning Models

**Key Points**

* Ensemble of gradient boosting models performs best
* Traditional ML models provide strong baselines
* Feature importance and model interpretability emphasized

**Discussion Summary**

Our comprehensive comparison of traditional machine learning models showed gradient boosting methods outperforming others. The ensemble approach combining multiple gradient boosting models achieved our best performance. Model interpretation using SHAP values was well-received by the group, allowing us to explain predictions in terms of feature contributions.

**Model Performance**

* Gradient Boosting Ensemble: Best performance
* Random Forest: Good performance
* Support Vector Regression: Moderate performance
* KNN: Lower performance

**Interpretability Approach**

* SHAP values for explaining individual predictions
* Feature importance analysis across different neighborhoods
* Interactive dashboard showing key factors for each prediction

**Next Steps**

* Fine-tune ensemble approach based on feedback
* Refine interpretation dashboard with additional visualizations
* Integrate with time series modeling component
* Prepare for LSTM implementation