**Housing Price Prediction Project - Meeting Log**

**Date:** March 16, 2025 **Phase:** Advanced AI/ML Models Presentations **Focus:** LSTM Update & Mid-term Feedback

**Key Points**

* LSTM models show promise but require more data
* Addressing mid-term feedback on model evaluation
* Hybrid approach combining LSTM with gradient boosting

**Discussion Summary**

Vikas presented results from neural network experiments, focusing on LSTM architectures for capturing temporal dependencies in housing prices. While deep learning approaches performed competitively, they didn't outperform our ensemble of gradient boosting models despite requiring significantly more computational resources. We discussed strategies to address mid-term feedback regarding cross-validation and model generalization.

**Model Performance**

* LSTM Neural Network: Competitive performance
* Gradient Boosting Ensemble: Better performance
* Hybrid (LSTM features + Gradient Boosting): Best performance

**Mid-term Feedback Addressed**

* Implemented geospatial cross-validation
* Added confidence intervals to predictions
* Enhanced interpretability with attention mechanisms
* Improved documentation of model architecture

**Next Steps**

* Collect additional data to better leverage LSTM capabilities
* Refine hybrid model architecture
* Implement attention mechanisms for interpretability
* Address remaining mid-term feedback points
* Explore specialized models for different property types/price segments