

# Walmart Demand Forecasting — Review-wise Video Plan

## ◆ Review-wise Completion Strategy

Review Stage   Target Completion   Judge Expectation

Review-2	~30%	Dataset understanding + baseline + early model
Review-3	~70%	Model comparison + evaluation methodology
Review-4	100%	Final system + deployment + business impact

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## ■ REVIEW-2 (30% Completion) — Foundation & Early Model

Focus: Core concepts, dataset understanding, and baseline forecasting

Video No.	Video Title	Duration	Key Coverage	Viva / Judge Alignment
Video-1	Retail Forecasting Basics (Conceptual Teaching)	20–25 mins	<ul style="list-style-type: none"><li>• What is demand forecasting</li><li>• Challenges in retail demand</li><li>• Time series fundamentals</li><li>• Why M5 dataset exists</li><li>• Business impact (inventory, supply chain)</li></ul>	<i>“Why forecasting is important?”</i> <i>“What is time series?”</i>
Video-2	Dataset Deep Dive & Linking	25–30 mins	<ul style="list-style-type: none"><li>• M5 dataset overview</li><li>• Sales, calendar, prices tables</li><li>• Hierarchical structure</li><li>• ID linking logic</li><li>• Example: FOODS_1_018_CA_1</li></ul>	<i>“Explain your dataset”</i> <i>“How are tables linked?”</i>
Video-3	Preprocessing & Baseline Model	~30 mins	<ul style="list-style-type: none"><li>• Wide → long format</li><li>• Missing value handling</li><li>• Aggregation strategy</li><li>• Baseline models (Naive, Moving Avg)</li><li>• Importance of baseline</li></ul>	<i>“We compared our model against a baseline”</i>

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## REVIEW-3 (70% Completion) — Modeling & Evaluation

Focus: Model selection, justification, and evaluation metrics

Video No.	Video Title	Duration	Key Coverage	Viva / Judge Alignment
Video-4	Forecasting Model Approaches ( <i>Conceptual</i> )	35–40 mins	<ul style="list-style-type: none"><li>• ARIMA / SARIMA</li><li>• ETS</li><li>• Prophet</li><li>• LSTM / GRU</li><li>• Transformers</li><li>• N-BEATS</li></ul> → Why LightGBM + Tweedie chosen	<i>“We evaluated multiple approaches and selected the most scalable one”</i>
Video-5	LightGBM + Tweedie (Core Model)	30–35 mins	<ul style="list-style-type: none"><li>• LightGBM fundamentals</li><li>• Tweedie distribution</li><li>• Zero-inflated demand handling</li><li>• Feature importance</li><li>• 28-day forecast horizon</li></ul>	<i>“Why Tweedie?”</i> <i>“Why predictions &lt; 1?”</i>
Video-6	Evaluation & Hierarchical Forecasting	~30 mins	<ul style="list-style-type: none"><li>• RMSE, MAE</li><li>• WRMSSE (clear explanation)</li><li>• Hierarchical forecasting</li><li>• Bottom-up vs Top-down</li><li>• Aggregation consistency</li></ul>	<i>“Evaluation follows M5 competition standards”</i>

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## REVIEW-4 (100% Completion) — Final System & Defense

Focus: System architecture, deployment, results, and viva readiness

Video No.	Video Title	Duration	Key Coverage	Judge Impact
Video-7	Application Architecture & Dashboard	~30 mins	<ul style="list-style-type: none"><li>• Backend → Model → CSV pipeline</li><li>• Pre-aggregation strategy</li><li>• Frontend dashboards &amp; filters</li><li>• Performance optimization</li><li>• Fast UI design</li></ul>	Appeals to non-CS judges
Video-8	Business Impact, Results & Viva Q&A	30–40 mins	<ul style="list-style-type: none"><li>• End-to-end demo</li><li>• Case study walkthrough</li><li>• Forecast vs history analysis</li><li>• Common viva questions</li><li>• Scalability &amp; future scope</li></ul>	Builds final review confidence