

Weibo Zheng

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EDUCATION

Northeastern University – Boston, MA

Master of Science (MS) in Data Analytics Engineering

May 2027

Coursework: Data Management, Foundation Data Analytics Engineering, Data Mining, Master's Project

Ohio State University – Columbus, OH

Bachelor of Science (BS) in Mathematics & Economics

December 2024

Coursework: Probability, Partial Differential Equation, Linear Algebra, Econometrics

WORK EXPERIENCE

Data Architect & Co-Founder | Hoolii Inc

June 2017 - April 2020

- Architected scalable data infrastructure serving 20+ enterprise clients with role-based access controls and data segregation, ensuring each client's data remained isolated and secure while processing 100K records monthly.
- Developed custom payroll calculation models with automated distribution, handling complex compensation structures and reducing processing time by 80%.
- Built Inventory management system integrating sales data with warehouse records, enabling real-time inventory tracking and automated discrepancy alerts for supply chain optimization.
- Implemented REST APIs for real-time data synchronization between Zoho Creator and multiple 3rd party platforms including e-signature services (DocuSign/AdobeSign) and sales/CRM systems, automating data workflows across the entire business stack.

PROJECTS

LLM Orchestration Project (In progress): Python, Anthropic API, Concurrent Programming

- Engineering production-ready system processing 200K+ tokens for structured decision analysis, demonstrating ability to work with cutting-edge generative AI technologies
- Designed 4-stage hierarchical orchestration pipeline (context analysis → individual evaluation → comparative analysis → synthesis) with structured JSON outputs and validation checks
- Implemented prompt engineering strategies and error handling for production deployment, optimizing token usage and API costs by 60% while maintaining analytical quality

Cross-Category Recommendation System: Python, Pytorch, HuggingFace Bert, PySpark, Numpy

- Built recommendation engine analyzing 2.2M Amazon reviews to suggest toys based on baby product purchases, demonstrating end-to-end ML pipeline from data processing to model deployment
- Fine-tuned BERT for sentiment analysis achieving 79.5% Recall and 48.6% NDCG, applying NLP techniques to extract product satisfaction patterns from review text
- Integrated collaborative filtering with BERT-based sentiment features using cosine similarity, creating hybrid system handling 520K cross-category users

Bitcoin Price Prediction: Python, ARIMA, Random Forest, XGboost, Random Forest, Sentiment Analysis

- Collaborated in team to develop time series forecasting model predicting Bitcoin prices using multiple approaches including ARIMA, Random Forest and XGboost with technical indicators and sentiment analysis
- Implemented feature engineering for financial time series data, applying statistical methods and machine learning techniques to capture price patterns and market trends

MySQL Database & Analytics System: SQL, MySQL, Python, MongoDB

- Designed normalized database schema for direct sales operations with integrity constraints and validation rules
- Wrote complex SQL queries for business intelligence including agent performance tracking, commission calculations, and inventory analytics