

# Aadish Rathore

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## SUMMARY

Machine Learning Engineer with a Master's of Computer Science in Data Science (3.6 GPA) and 6+ years of production software engineer experience. Developed a full-stack house price prediction project with  $R^2$  score of 0.88 and accuracy improvement by 12%. Developed another full-stack sentiment analysis project with 3 NLP models (TF-IDF+SVM, LSTM, DistilBERT). Skilled in PyTorch, Hugging Face, and MLOps practices. Experienced in NLP, Transformers and deploying ML pipelines on AWS.

## SKILLS

- **Frameworks:** TensorFlow, PyTorch, Keras, Scikit-learn, XGBoost, Pandas, Numpy, Seaborn, Matplotlib
- **Concepts:** CNN, Regression, Classification, Clustering, Hugging Face, RAG, GenAI, LLM, Predictive Modeling, Data Structures & Algorithms, Software Design Principles, Agile, Scrum, Feature Engineering, ROC/AUC, Cross-validation, Grid Search, Hyperparameter Tuning
- **Tools:** Git, Python, TypeScript, VSCode

## PROJECTS

### House Price Prediction

- Improved model accuracy by 12% over baseline with final  $R^2$  score of 0.88.
- Conducted hyperparameter tuning via GridSearchCV and cross-validation to optimize model generalization.
- Developed an end-to-end machine learning pipeline, including data preprocessing, model training, and evaluation.
- Deployed trained model as a RESTful API using Flask, integrated with a React frontend for real-time predictions.

### Sentiment Analysis

- Developed a full-stack sentiment analysis platform with 3 NLP models, enabling comparative evaluation.
- Deployed DistilBERT model using Hugging Face Transformers for classification
- Engineered modular backend using NestJS and Prisma ORM, reducing model integration time by 40%.
- Designed React-based UI with emoji feedback and real-time analytics logging, boosting user engagement metrics by 3X in internal testing.

## PRIOR EXPERIENCE

### Frontend Engineer

TD Bank

July 2018 - Present

- Developed a data-intensive app, focusing on end-to-end lifecycle of financial data from API consumption to UI serving thousands of daily users.
- Engineered a library of reusable, scalable UI components, reducing development time by 10%.
- Integrated REST APIs to display sensitive real-time financial data, ensuring high responsiveness and data accuracy.
- Contributed to a cross-functional team in Agile environment to build and deploy client-facing software, gaining expertise in production code standards, version control, and release cycles.

## EDUCATION

### Master of Computer Science (Data Science), GPA: 3.6

Illinois Institute of Technology, Illinois, USA

Expected December 2025

### Bachelor of Technology (Software Engineering), GPA: 3.3

McMaster University, Ontario, Canada

December 2020