

Aatmaj Amol Salunke

Boston, MA | (617) 708-9926 | salunke.aa@northeastern.edu | github.com/aatmaj28 | linkedin.com/in/aatmaj-salunke-7106041b0/

Available: **May 2025 – Dec 2025**

EDUCATION

Northeastern University, Boston, MA Sept 2024 - Dec 2026
Master of Science in Artificial Intelligence (Khoury College of Computer Sciences) **CGPA:** 3.75/4.0

Courses: Reinforcement Learning and Sequential Decision Making, Foundations of Artificial Intelligence, Algorithms, NLP

Manipal University Jaipur, India Oct 2020 – May 2024
Bachelor of Technology in Computer Science and Engineering **CGPA:** 8.92/10

Courses: Natural Language Processing, Deep Learning, Design and Analysis of Algorithms, Database Management Systems, Computer Vision

EXPERIENCE

Artificial Intelligence Mentee | IBM | Rajasthan, India June 2023 – Jul 2023

- Spearheaded development of a Mental Fitness Tracker, leveraging **time-series analysis** and feature engineering to analyze **8** key mental health indicators. Achieved **99.6% accuracy** with a regression ensemble incorporating **L1/L2** regularization and **gradient boosting**.
- Engineered an end-to-end Python data pipeline, encompassing distributed data processing with **Apache Spark**, and advanced data preprocessing (**imputation, normalization, scaling**) on **60,840 records**. Improved prediction performance by **15%** via comparative analysis of machine learning models, including deep neural networks and **ensemble** methods.

Data Science/Machine Learning Intern | Celebal Technologies | Rajasthan, India May 2023 – Aug 2023

- Designed an **AI chatbot** for a client, enhancing support interactions with **LLMs and ERP** data access, integrated into web and messaging platforms. Leveraged **Kubernetes** for container orchestration and scalability, and **Nginx** for reverse proxying and load balancing.
- Employed **RAG** to enable the chatbot to access FAQs, documentation, and ERP systems (specifically **SAP S/4HANA**), improving response accuracy and achieving a **20%** improvement in key metrics. Used **Python, Rasa, and LangChain**, with data integration via **REST APIs** and **Kafka** for asynchronous messaging.

SKILLS

Languages:	Python, C++, Java, C, C#, HTML/CSS, JavaScript, MySQL, React, Next.js
Libraries/Frameworks:	TensorFlow, PyTorch, Transformers, Sklearn, Huggingface, NLTK, Gym, Django, LangChain, MS Azure
ML and DL:	CNNs and RNNs, Computer Vision, Natural Language Processing, Reinforcement Learning
Data Science:	Exploratory Data Analysis, Data Preprocessing, Data Augmentation, Feature Engineering, Statistics
Backend/API:	Django, Flask, Pinecone, SQL, MongoDB, Unity (RL), Web scraping, BeautifulSoup, REST APIs, LLMs, FAISS

ACADEMIC PROJECTS

AI-Powered Financial Document Q&A Chatbot Using RAG & LLMs *Information Retrieval, LLMs, LangChain*

- Engineered** an AI-driven **RAG-based financial chatbot**, leveraging **FinBERT, FAISS, and LangChain** to retrieve and generate insights from **1,000+ financial documents**, including **SEC filings** and **earnings reports**, achieving **85% higher retrieval accuracy** and reducing query response time by **37%** through implementation of **semantic** and **keyword** search with **Maximum Marginal Relevance (MMR)**.
- Leveraged **3 embedding models** and **2 LLM providers (Mistral, Gemini)** to process multi-page financial documents **40%** faster than traditional methods, enabling extraction of insights across **15+** specialized financial document sections.

Airbnb Property Search Bot *NLP Bot, LLMs, Information Retrieval*

- Developed an **AI-powered Airbnb property search bot** integrating **NLP** and **hybrid retrieval** (dense embeddings + BM25) with **Pinecone**, improving search relevance by **40%** and reducing query processing time by **30%**.
- Implemented a Generative AI based query refinement system using **Google's Gemini model**, enhancing natural language search accuracy by **35%** and enabling real-time property recommendations within a **Streamlit** interface.

SmartCart - AI-driven grocery shopping made effortless, affordable, and personalized *LLM, Django REST, React.js & Next.js*

- Developed an AI-powered grocery delivery web app, **SmartCart**, during the **Innovate 2025 Hackathon**, leveraging **LLMs** for automated ingredient list generation from dish names and real-time price comparison, reducing manual shopping effort by **50-60%**.
- Implemented an optimization algorithm for vendor selection, integrating **LLM-driven deal discovery** to find the best possible prices, lowering total cart costs by **10-12%**, while enhancing customer **satisfaction** through **dietary preference** and **allergy** considerations.

PUBLICATIONS

- [Enhancing Contextual Understanding in NLP: A Subword Tokenization Approach with ELMo and BERT](#)
- [OTPLM: An Ontology-Driven Approach for Tagging Plants of Medicinal and Ornamental Value using Hybrid Semantics and Strategic Learning Models](#)
- [DRHA: Document Recommendation for Horticulture and Agro-Based Farming](#)