

# ANSH AYA

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## SUMMARY

Experienced AI Engineer with expertise in ML and creating innovative solutions to address pressing industry needs. Seeking to work in a collaborative team environment to solve complex problems and contribute to data-driven decision making.

## PROFESSIONAL EXPERIENCE

### Abecedarian, LLC, Boston, MA |AI Research Engineer

March 2024 - December 2024

- Designed an automated grading software with **Azure AI Search** for scalable data processing and utilized **OpenAI API** to compare responses with reference answers, achieving an automated scoring accuracy of 75%, streamlined grading process.
- Deployed a **Streamlit**-based Q&A chatbot for students seeking easy access to course-related information, integrated **Pinecone** vector database with **RAG** to enhance semantic search accuracy, delivering a scalable and interactive solution.
- Collaborated with cross-functional teams to research on **GenAI** latest advancements by creating technical documentation with **Jupyter Notebooks** and communicating implementation strategies, offering innovation in products & services.
- Developed and fine-tuned a **BERT**-based model for a low-level programming language, optimizing tokenization and training pipelines to improve code comprehension and translation of machine instructions into human-readable formats.

### DTonomy INC, Cambridge, MA |AI Engineer Intern

January 2023 - June 2023

- Designed a customer-centric chatbot leveraging PEFT techniques (LORA) with **Hugging Face**, fine-tuned on company-specific data to improve response accuracy, minimize hallucinations and enhance overall user satisfaction.
- Collaborated with cross-functional teams to build a **GPT-3.5**-powered plug-in, enabling users to retrieve or summarize website information, provided a robust solution for enhancing accessibility and streamlining information retrieval.
- Fine-tuned a large-scale ML model on **AWS SageMaker & S3** and deployed a prediction API. Also, optimized model parameters to reduce energy consumption while maintaining accuracy, resulted in \$30,000+ in cost savings.

### Trueserve Technologies Pvt Ltd, Mumbai, India |Machine Learning Intern

July 2020 - December 2020

- Led the development of fraud detection system for a cybersecurity client, leveraging **ML** models to identify vulnerabilities with 80% accuracy. Applied data analysis to uncover threat patterns, reducing false positives and improving overall security.
- Created a recommendation system for banking client, executed predictive analytics with 90% accuracy to recommend available consultant based on user requested service type & date/time, resulting in preventing scheduling conflicts.
- Introduced **Git** for version control, updated code debugging efficiency by 40% and fostering collaborative development.

## PROJECTS

### Appointment Scheduling with Chatbots [GitHub](#)

September 2023 - December 2023

- Objective & Goals: Create an intelligent chatbot to streamline banking scheduling processes and elevate user experiences.
- Approach: Innovated a python-based chatbot using **LangChain** framework & **OpenAI** model for appointment scheduling, integrating **Zapier** to automate actions in Google Calendar and Gmail for sending appointment confirmations and updates.

### Employee Attrition Prediction [GitHub](#)

January 2021 - May 2021

- Objective & Goals: Develop a predictive tool to analyze employee attrition patterns, improving operational efficiency.
- Approach: Built a predictive tool using **Random Forest**, achieving 98% accuracy in identifying high-risk employees. Designed a **Django**-based dashboard to visualize attrition trends, enabling data-driven retention strategies and workforce planning.

## EDUCATION

### Northeastern University, Boston, USA

September 2021 - December 2023

*Master of Professional Studies, Analytics*

Relevant Coursework: Python & Analytics Technology, Data Mining, Predictive Analytics, Probability Theory & Statistics.

### University of Mumbai, Mumbai, IN

August 2017 - June 2021

*Bachelor of Engineering, Information Technology*

Relevant Coursework: Data Warehousing, Data Structure Analysis, Artificial Intelligence, Big Data.

## SKILLS

**Programming Languages and Cloud Tools:** Python, R, SQL, MATLAB, HTML/CSS, AWS (S3, EC2), MS Azure, Git, Streamlit.

**Deep Learning:** Neural Networks, NLP Models, LangChain, OpenAI, PyTorch, Tensorflow, Keras, Kubernetes, Hugging Face.

**Machine Learning:** Linear & Logistic Regression, SVM Classifiers, Decision Trees, Random Forest Algorithm.

## PUBLICATION

Published a technical paper on IJARIIT, based on a prediction system, ISSN: 2454-132X. [IJARIIT](#)