# Rushali Mohbe

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## EDUCATION

**Northeastern University** **Sept 2023 – Present**
*Master's in Artificial Intelligence, GPA: 3.92/4.0* *Boston, Massachusetts*

**Ramaiah Institute of Technology** **Sept 2016 – May 2020**
*Bachelor's in Computer Science and Engineering, GPA: 9.39/10* *Bangalore, India*

## RELEVANT COURSEWORK

**Machine Learning, AI Ethics, Algorithms, Artificial Intelligence for Human-Computer Interaction**, Deep Learning, Discrete Mathematics, Probability, Statistics, Operating Systems, Database Systems.

## EXPERIENCE

**Institute for Experiential AI, Northeastern University** **Sept 2023 – Present**
*Student Researcher* *Boston, Massachusetts*

- Designed an Extract, Transform and Load (ETL) pipeline processing 100,000+ WHO/ProMED outbreak alerts, enabling efficient LLM fine-tuning and achieving 92% accuracy in outbreak significance detection.
- Developing a Large Language Model(LLM) based system to simulate pandemic preparedness, delivering actionable insights that can increase policymakers efficiency by 30% .
- Implementing a Retrieval-Augmented Generation (RAG) system, enhancing LLM output relevance by 60% and reducing hallucinations by 80%.

**Indian Institute of Science** **Aug 2020 – June 2023**
*R&D Engineer* *Bangalore, India*

- Architected a low-latency, scalable teleoperation system for robot assistants, achieving 350ms average latency for real-time intercontinental control.
- Engineered a privacy-preserving face anonymization solution for video calls, utilizing facial landmark tracking and 3D avatar rendering, ensuring privacy while maintaining 95% of facial expression information.
- Implemented a real-time speech-to-text and phoneme/viseme recognition pipeline, enabling natural robot speech mimicry with 91% accuracy.
- Developed a real-time machine learning model for viseme detection, improving avatar expression accuracy by 75% and enhancing user experience scores by 40%.

## PROJECTS

**Explaining predictions of heart congestion from ECGs** **Sept 2023**

- Adapted LIME (Local Interpretable Model-Agnostic Explanations) to interpret ECG-based heart congestion predictions, improving model interpretability by 50%.

**Generalized aspect-based sentiment analysis** **Mar 2020**

- Engineered an NLP pipeline using an unsupervised clustering algorithm for aspect term extraction and sentiment analysis, achieving 87% accuracy on domain-specific reviews.

## PUBLICATIONS

**An Autonomous Mobile Robot based Tele-Presence System with Augmentation** **Mar 2023**
*ICRA 2nd Workshop Toward Robot Avatars*

## ACHIEVEMENTS

**$10M ANA Avatar XPRIZE Competition** | *Semifinalist* **2021**

**Bootstrap Paradox Hackathon** | *First place* **2019**

## SKILLS

**Programming:** Python, SQL, Flask, JavaScript, C++, Java.
**Frameworks:** Tensorflow, Keras, PyTorch, Transformers, Langchain, NLTK, OpenCV, OpenGL, React, ROS, Neo4j.
**Tools/Utilities:** Azure, AWS, Git, Docker, ChatGPT, Llama.

## INTERESTS

Nail art, Digital art, Boxing, Volleyball, Baking, Gardening, Aerial Silks, Hula hooping.