# SAI AKSHAY MENTA

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## OBJECTIVE

Highly motivated AI researcher and Artificial Intelligence master's student with **4 published research papers**, specializing in **Generative AI**. Experienced in designing, training, and deploying **scalable AI systems**, with hands-on expertise in **large language models (LLMs)** and **visual-language models (VLMs)**. Passionate about solving complex, real-world challenges. Seeking opportunities to contribute to cutting-edge projects at the intersection of AI research and impactful applications.

## EDUCATION

**Northeastern University** **Sep 2024 - May 2026 (Expected)**
**Master of Science in Artificial Intelligence**
**Relevant Coursework:** Foundations of Artificial Intelligence, Program Design Paradigm
Natural Language Processing, Algorithms, Large Language Models

**Amrita Vishwa Vidyapeetham University, India** **Oct 2020 - Jun 2024**
**Bachelor of Technology in Computer Science and Engineering (Artificial Intelligence)**
**Relevant Coursework:** AI in Natural Language Processing, AI in Speech Processing, Deep Learning for Signal & Image Processing, Deep Reinforcement Learning, Python for Machine Learning, Big Data Analytics

## SKILLS

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|---|---|
| **Frameworks/Libraries** | Transformers, PyTorch, TensorFlow, LangChain, OpenRouter |
| **Specializations** | Generative AI (Large Language Models), Natural Language Processing, AI Agents |
| **Programming Languages** | Python (Advanced), SQL (Intermediate), C++ (Intermediate) |
| **Tools & Cloud** | PowerBI, Git, Google Cloud Platform (Vertex AI, Compute Engine, Vision API) |

## EXPERIENCE

**Data Analytics Intern** **Feb 2024 - Jun 2024**
**Genpact** | *Power BI, Python, SQL, Generative AI, ML* *Hyderabad, India*

- Created a Power BI dashboard for 500K+ HR records using Python ETL and SQL, delivering real-time workforce insights.
- Developed a Python ML pipeline with scikit-learn and PyTorch, performing feature engineering and model tuning to identify 10+ key HR predictors, increasing accuracy by 30%.
- Automated data prep by orchestrating AI-augmented Python (OpenAI API & Pandas) ETL scripts and SQL stored procedures in an Airflow DAG, cutting manual preprocessing by 40%.

## PUBLICATIONS

- **Semi Supervised Flood Damage Detection Using Satellite Images**
  *Lecture Notes on Data Engineering and Communications Technologies*, Springer Nature
  *ICCAIML 2024*, doi: 10.1007/978-981-96-0451-711 Apr 2025
- **Enhancing Knee Osteoarthritis Severity Level Classification Using Diffusion Augmented Images**,
  *ICACECS 2023*, Springer, doi: 10.2991/978-94-6463-314-6_27 Dec 2023
- **A Few-Shot Approach to Dysarthric Speech Intelligibility Level Classification Using Transformers**,
  *14th ICCCNT*, IEEE, doi: 10.1109/ICCCNT56998.2023.10308067 Nov 2023
- **Improving Reinforcement Learning Agent Training Using Text-Based Guidance: A Study Using Commands in Dravidian Languages**, *3rd Workshop on Speech and Language Technologies for Dravidian Languages*, ACL Anthology, https://aclanthology.org/2023.dravidianlangtech-1.5 Sep 2023

## PROJECTS

**EmoLingo Chatbot: Emotionally and Linguistically Adaptive AI Assistant** **Feb 2025 – Apr 2025**
*Tech Stack: Python, PyTorch, Hugging Face Transformers, Streamlit, Groq API* [GitHub]

- Built a multi-model pipeline combining emotion detection, tone classification, and English proficiency estimation to deliver personalized chatbot responses.
- Fine-tuned **4 transformer models** (RoBERTa, T5, ELECTRA, DistilBERT) on GoEmotions, ICNALE, and a custom style dataset for robust multi-label emotion and writing-style detection.
- Achieved **60.8% micro-F1** for emotion detection and **77.8% accuracy** across **12 writing styles**, enabling inclusive, empathetic interactions.
- Developed a Streamlit UI and integrated a dynamic prompting system with LLaMA 3-70B via the Groq API for real-time, tone-aligned, simplified response generation.