

# Srinivasa Sai Chava

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## Education

### Boston University

Master of Science in Artificial Intelligence

Boston, MA

Expected Dec 2026

### Indian Institute of Information Technology Dharwad

Bachelor of Technology in Data Science and Artificial Intelligence

Dharwad, India

Nov 2021 – May 2025

## Experience

### Machine Learning and Flutter Trainer, Datavalley.ai

Contract Trainer (Academic Workshops)

Vijayawada, India

Jan 2025 - Jul 2025

- Conducted **hands-on ML and Flutter workshops** across partner colleges, creating **industry-aligned lab materials** and mentoring teams through **end-to-end project deployment**.
- Built and showcased a **production-grade Flutter app** featuring **role-based authentication**, secure **ZegoCloud video**, and **UPI payment integration**, demonstrating complete release workflows.

### AI-Driven Text Analytics, IIIT Dharwad

Team Lead, Indian Language Machine Translation Evaluation

Dharwad, India

Aug 2023 – Jul 2024

- Led a comparative study on **Google Translator vs. AI4Bharat's IndicTrans2**, implementing translation workflows and conducting **Semantic Textual Similarity (STS)** evaluation on IIT Bombay's multilingual dataset.
- Demonstrated that **IndicTrans2 outperformed Google Translator** in preserving **semantic accuracy and linguistic nuances**, highlighting the potential of specialized **Indian-language MT frameworks**.

## Projects

### Boston Bus Equity

Course Project for CASC506: Data Science Tools and Applications

[GitHub](#)

Sep 2025 - Present

- Analyzing MBTA bus performance to **identify service equity gaps** by correlating historical ridership and reliability data with community demographics
- Developing a suite of machine learning models, including **time-series** and **tree-based methods**, to forecast delays and identify the key factors impacting service quality

### RAG-assisted explainable hate speech detection model from GenerativeAI

Under the guidance of Dr. Sunil Saumya | Associate Dean, IIIT Dharwad

[GitHub](#)

Feb 2024 – Nov 2024

- Developed an **explainable hate and fake news detection system** integrating **Quantized LoRA (QLoRA)** fine-tuning with **Retrieval-Augmented Generation (RAG)** for multilingual social media text, achieving **78.4% Macro-F1** on benchmark datasets.
- Designed a **hybrid pipeline** combining **IndicXlit/IndicTrans2** transliteration, embedding extraction (**BERT, XLM-R, Electra**), and **LangChain-based retrieval**, reducing hallucinations by 60% and improving context relevance in hate-speech explanations.

### FakeHate: Multi-Task Detection of Fake News and Hate Speech in Multilingual Text

Team Lead under the supervision of Dr. Sunil Saumya, Associate Dean, IIIT Dharwad, and

[GitHub](#)

Dr. Shankar Biradar, Assistant Professor, MIT Manipal

Aug 2023 – Apr 2024

- Developed a **multi-task deep learning model** for simultaneous **fake news and hate speech detection** on multilingual social media data using **IndicXlit** and **IndicTrans2** for transliteration and translation.
- Integrated embeddings from **BERT, mBERT, ALBERT, Electra, and XLM-Roberta** with **cluster-based feature engineering**, improving **Hate F1 from 81.97 → 97.15** and **Fake F1 from 70.16 → 76.21**, effectively enhancing harmful-content classification accuracy.

## Publications

### Hate Speech Detection in Telugu and Hindi Code-Mixed Text

[ACL Anthology](#)

- IIITDWD\_SVC@DravidianLangTech-2024: Breaking Language Barriers; Hate Speech Detection in Telugu-English Code-Mixed Text(Sai et al., DravidianLangTech 2024)

## Technical Skills

**Programming & Frameworks:** Python, C++, Java, PyTorch, TensorFlow, Keras, Scikit-learn, Hugging Face Transformers, BERT, RAG, LangChain, QLoRA, FastAPI, Streamlit

**Developer & MLOps Tools:** Linux, Git, Docker, Kubernetes, AWS, Azure, Apache Airflow, Elasticsearch, MySQL

**Machine Learning & Data Science:** OpenCV, Tesseract, Data Preprocessing, Feature Engineering, XGBoost, ONNX

## Leadership and Extracurriculars

**Core Team Member - Google Developer Students Club, IIIT Dharwad:** Led machine learning and app development initiatives fostering innovation; organized workshops and hackathons to strengthen community engagement.

**Cricket Team Representative - IIIT Dharwad:** Represented the institute in inter-IIIT tournaments; contributed to team success and promoted **sportsmanship and camaraderie** through active participation in athletics.