Srinivasa Sai Chava

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Education

Boston University — Boston, MA
Master of Science in Artificial Intelligence — *Expected Dec 2026*

Indian Institute of Information Technology Dharwad — Dharwad, India
Bachelor of Technology in Data Science and Artificial Intelligence — *Nov 2021 – May 2025*

Experience

Machine Learning and Flutter Trainer, Datavalley.ai — Vijayawada, India
Contract Trainer (Academic Workshops) — *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 Zego-Cloud video**, and **UPI payment integration**, demonstrating complete release workflows.

AI-Driven Text Analytics, IIIT Dharwad — Dharwad, India
Indian Language Machine Translation Evaluation — *Aug 2023 – Jul 2024*
- Implemented **Google Translator vs. AI4Bharat's IndicTrans2** translation workflows and conducted **Semantic Textual Similarity (STS)** evaluation on IIT Bombay's multilingual dataset.
- **IndicTrans2 outperformed Google Translator** in preserving **semantic accuracy and linguistic nuances**, validating the effectiveness of specialized **Indian-language MT frameworks**.

Projects

Sidewalk Accessibility Validator — *GitHub*
Prize Winner – BU Civics Hack 2026 (Cyvl Problem Statement) — *Feb 2026*
- Built a full-stack ADA compliance tool (**FastAPI + React/Vite**) combining a **rule-based map audit** on GeoJSON sidewalk assets with an **Image AI Advisor** (custom **PyTorch classifier + Llama-4 vision**) to predict sidewalk condition and generate actionable improvement guidance.

Boston Bus Equity — *GitHub*
Course Project – CASCS 506: Data Science Tools and Applications — *Sep 2025 – Dec 2025*
- Analyzing MBTA bus performance to **identify service equity gaps** by correlating historical ridership and reliability data with community demographics.
- Developing **time-series** and **tree-based ML models** to forecast delays and surface key drivers of service disparities.

RAG-Assisted Explainable Hate Speech Detection — *GitHub*
IIIT Dharwad — *Feb 2024 – Nov 2024*
- Built an **explainable hate and fake news detection system** integrating **QLoRA fine-tuning** with **Retrieval-Augmented Generation (RAG)** for multilingual social media text, achieving **78.4% Macro-F1** on benchmark datasets.
- Combined **IndicXlit/IndicTrans2 transliteration**, **BERT/XLM-R/Electra embeddings**, and a **LangChain retrieval pipeline**, reducing hallucinations by **60%** and improving context relevance in hate-speech explanations.

FakeHate: Multi-Task Detection of Fake News and Hate Speech — *GitHub*
IIIT Dharwad — *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**.

Publications

Impact of IDIOT Syndrome: ML-Based Risk Scoring for Health Anxiety — *Journal Link*
Tuijin Jishu / Journal of Propulsion Technology, Vol. 47, No. 01 (2026) — *Jan 2026*
- Surveyed 450 students on health-search anxiety; built a **Random Forest classifier (68% accuracy)** and **Linear Regression** risk scorer (R^2=0.62) via **TF-IDF features** (Cronbach's α=0.87).

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, AWS, Azure, Apache, MySQL

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

Leadership and Extracurriculars

Core Team – Google Developer Students Club, IIIT Dharwad: Led ML and app development initiatives; organized workshops and hackathons to strengthen community engagement.

Cricket Team Representative – IIIT Dharwad: Represented institute in inter-IIIT tournaments; promoted sportsmanship and team camaraderie.