

Rachana B N

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Summary

To apply my strong foundation in machine learning, natural language processing, and software development to contribute to innovative projects in a dynamic tech environment. I am passionate about leveraging technology to solve real-world problems and am eager to grow professionally while working on impactful projects.

Education

Mangalagangothri, Mangalore University, MCA

Feb 2024 – Dec 2025

- GPA: 8.22

- **Coursework:** Machine Learning, NLP, AI, Cryptography Networks Security, IOT.

Maharani's Science College For Women, BSc-PMC

Mar 2021 – Sep 2023

- GPA: 7.68

- **Coursework:** Physics, Mathematics, Computer Science.

Technologies

Languages: Python, SQL

Technologies and Tools: ML, DL, TensorFlow, Transformers (BERT), Git, GitHub, Jupyter Notebooks, MS Tools.

Soft Skill: Time Management, Communication, Analytical problem solving.

Projects

Kasturi BERT : Design and Implementation of Transformer-based LLM,
Academic project. (MCA)

2025 – 2026

- Developed KasturiBERT, a Kannada-specific BERT model trained.
- Built a custom WordPiece tokenizer with script-aware normalization and syllable preservation.
- Trained using PyTorch with MLM objective and optimized via mixed-precision, checkpointing, and cosine LR scheduling.
- Achieved strong results on Kannada NLP tasks, outperforming multilingual models in domain-specific settings.
- Python, PyTorch, BERT-Base.

Real Time Video Analysis Using AI-HPC CDAC, Bangalore

Aug 2025 – Dec 2025

- Performs real-time video analysis by integrating AI models with HPC infrastructure for high-speed processing.
- Uses frame-by-frame inference to detect, classify, and track objects or events in live video streams.
- Optimized for low-latency, high-throughput environments like surveillance, traffic monitoring, and smart cities.
- Python, HPC-AI.

Publication Works

1: Handcrafted Features Fusion with Multilingual Models for Hope Speech Detection in Spanish and English.
IberLEF 2025

2: Experiments with Multilingual Models for Hope Speech Detection. PolyHope-M at RANLP2025

Certifications

C-DAC High Performance Computing AI Certification.
LLM Certification.

Aug 2025 - Dec 2025