Meripe Sathvik

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EDUCATION

Indian Institute of Technology Dharwad

Computer Science and Engineering - CGPA: 8.70

Dharwad, Karnataka Dec 2022 – Apr 2026

Projects

Evolutionary Vision Transformer Research

Jan 2025 – Present

Deep Learning Research

- Explored EvolutionViT, a patch pruning framework for accelerating Vision Transformers (ViT) through multi-objective optimization.
- Studied **pruning methods** to balance computational cost and model performance under **resource constraints** in edge devices.
- Analyzed the impact of constraint handling strategies to ensure efficient ViT deployment while maintaining accuracy.
- Implemented experiments on ViT pruning, leveraging **PyTorch** for model acceleration and structured pruning analysis.

Continual Learning and Loss of Plasticity Research

Sep 2024 – Nov 2024

Deep Learning Research

- Researched Continual Learning and Loss of Plasticity in feed-forward neural networks using the MNIST dataset.
- Developed and evaluated **Continual Backpropagation (CBP)**, achieving superior plasticity retention compared to standard backpropagation.
- Designed experiments across 800 sequential tasks, performing **statistical analysis** to validate findings.
- Utilized **PyTorch** and **Torchvision** for model development, data preprocessing, and result visualization.

Recommendation System

Feb 2024 – Mar 2024

Machine Learning

- Led the development of a Movie Recommender System, integrating Content-Based and Collaborative Filtering techniques
- Directed the implementation of Bag of Words, TF-IDF, BERT, SVD, and Neural CF algorithms
- Utilized TensorFlow and scikit-learn to develop predictive models, optimizing their performance and reliability.
- Designed and launched a user-centric **Django website**, facilitating movie discovery with an intuitive interface

TECHNICAL SKILLS

Programming Languages: C, C++, Python

Technologies: HTML5, Bootstrap, CSS, SQL, NumPy, Pandas, LATEX, Matplotlib

Achievements

- Awarded AP Grade, in Advanced Topics in Deep Learning Course (CS707) in IIT Dharwad.
- 2nd place (out of 150 participants), in Start Sprint by Career Development Cell, IIT Dharwad
- 4th place out of (out of 200 participants), in Summer Of Innovation by Coding Club, IIT Dharwad.

KEY COURSES

Computer Science: Data Structures and Algorithms, Design and Analysis of Algorithms, Computer Architecture, Artificial Intelligence, Software Systems, Convolutional Neural Networkss

Mathematics: Linear Algebra, Calculus, Discrete Maths, Probability, Data Analysis, Theory of Computation

EXTRACURRICULARS

- Outreach Team Member, PARSEC Annual Techfest, IIT Dharwad
- Participant at Sleepless Coding Saga, Hackathon on Devfolio.