Chandradithya Jonnalagadda

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EDUCATION

Indian Institute of Technology (IIT), Tirupati   Tirupati, India
B.Tech in Computer Science and Engineering (Grade: 9.32/10.0)   *2021 - 2025*

TECHNICAL SKILLS

Programming Languages: C, C++, Python, Java, JavaScript, SQL
Frameworks: PyTorch, PyTorch Geometric (PyG), Unsloth, TensorFlow, Keras, MERN, ROOT, StableBaselines, Google Firebase
Libraries & Tools: HuggingFace, Git, Vim, Docker, Bash

PROJECTS

Risk-Sensitive Reinforcement Learning   Aug 2024 – May 2025
Bachelor's Thesis, Advisor: Dr Ajin George Joseph   *RL Theory, Stochastic Approximation, PyTorch*
- **Developed two novel risk-sensitive actor-critic algorithms** grounded in exponential utility theory, enabling fine-grained control over tail behavior in reinforcement learning using linear function approximation and single-sample SPSA
- **Mathematically derived and proved convergence of a nonlinear exponential Bellman operator**, enabling a provably convergent risk-sensitive policy iteration framework
- **Implemented and validated the risk-sensitive algorithms** with provable asymptotic and finite-sample guarantees, achieving improved robustness under uncertainty in environments like Cart-Pole and Acrobot
- **Currently under review at NeurIPS 2025**

Digitizing Doctor's Prescriptions   Jan 2024 – May 2024
Research Project, Guide: Dr Kalidas Y   *Python, PyTorch, HuggingFace, ImageJ*
- Developed an **end-to-end deep learning model for digitizing prescription images**, enabling automated text extraction
- Conducted an extensive literature review on handwritten text segmentation techniques to inform model design
- Replicated state-of-the-art pixel-level and paragraph-level handwritten text recognition models and applied them to a **custom-built prescriptions dataset**

MiFeMoDEP: Mixed Feature Model for Defect Prediction   Feb 2024 – Apr 2024
https://github.com/ChandradithyaJ/MiFeMoDEP   *Python, PyTorch, PyG, gensim*
- Utilized CodeBERT and Control Flow Graphs (CPGs) to **extract semantic and flow-related information** for code analysis
- Employed LIME to generate defect probability scores, enhancing model interpretability
- **Achieved state-of-the-art defect prediction performance using only 10% of the dataset (20k/200k samples)**, showcasing model data efficiency and generalizationdemonstrating model efficiency

EXPERIENCE

Robert Bosch Center for Data Science and AI (IIT Madras)   May 2024 – Jul 2024
Research Intern, Advisor: Prof Balaraman Ravindran   *Chennai, India*
- Designed a **graph-to-text explanation framework** for Heterogeneous GNNs using GNNExplainer, domain-specific LLMs, and Chain-of-Thought (CoT) prompting, improving interpretability for medical and legal GNN models
- Developed GNNs for legal and medical applications, achieving AUCs of **0.94** and **0.86**, and F1 scores of **0.78** and **0.88** (both multilabel) on the Legal Judgment Prediction and Medical Procedure Necessity Prediction tasks, respectively

Department of Computer Science and Engineering, IIT Tirupati   Aug 2023 – May 2025
Undergraduate Teaching Assistant   *Tirupati, India*
- CS307L - Artificial Intelligence (Spring 2025; Head TA)
- CS301P - Compiler Design Laboratory (Fall 2024; Head TA)
- CS305P - Operating Systems Laboratory (Fall 2024; Head TA)
- ES109L - Introduction to Data Science and ML (Spring 2024)
- ES104M - Introduction to Programming (Fall 2023)

RELEVANT COURSES

Reinforcement Learning, Stochastic Decision Processes, Computational Methods in Optimization, Machine Learning, Artificial Intelligence, Deep Learning, Games and Information, Data Structures and Algorithms, Design and Analysis of Algorithms

POSITIONS OF RESPONSIBILITY

Club Head   Jun 2024 – May 2025
Sigma Squad (AI/ML Club)   *IIT Tirupati*
- Mentoring students in club projects on Reinforcement Learning, Deep Learning for Computer Vision, TinyML, and LLMs
- **Top 10 at Inter IIT Tech Meet 12.0** (HighPrep PS on Tool Augmentation of LLMs)
- Participated in Inter IIT Tech Meet 13.0 (HighPrep PS on **Agentic AI pipeline with DynamicRAG**)
- Organized and conducted workshops and hackathons
- Core Member (Jul 2023 - Jun 2024)