Sree Dhyuti Nimmagadda

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Interests

Data Structures and Algorithms, Machine Learning, Deep Learning Architectures, NLP, CV, Cloud Services, Optimization, AI Ethics

Education

Northwestern University — Evanston, IL, USA
Master's, Artificial Intelligence. — Sep 2024 - present

Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram — Chennai, India
M.Tech + B.Tech (Integrated Degree), Computer Science Engineering. CGPA: 8.86/10.00 — Jul 2019 - May 2024

Conference Publications & Other Achievements

- **Conference Paper IEEE Region 10 (TENCON 2024): Nimmagadda Sree Dhyuti**, Mercy Faustina, B.Sivaselvan **"Improved Text Summarization with RL-Enabled PEGASUS and Siamese Network Evaluation" - Singapore 2024**
- **In the top 45 global finalists out of 1500 teams**, of the OpenCV AI Competition 2022 ***2022***

Skills

- **Programming Languages**: Python, C, C++, R, Verilog, NASM
- **Machine Learning Frameworks**: TensorFlow, PyTorch, Scikit-learn, Keras
- **Hardware and Optimization**: CUDA, OpenMP, MPI, NVIDIA DeepStream, AWS Neuron, TensorRT, TPUs.
- **Cloud Platforms**: AWS, Google Cloud, Microsoft Azure
- **DevOps/Tools**: Docker, Git, FastAPI, Flask, Jupyter Notebook, CI/CD, VS Code, Anaconda, SQL, Multisim, Keil, Arduino
- **Presentation tools**: LaTex, Microsoft Office tools, Tableau, Canva, Markdown

Experience

- **Machine Learning Research Intern** — *May 2023 - Oct 2023*
  IIT Madras - BioSystems Engineering and Control Lab — Chennai, India
  – Developed a regression model on NIR Spectroscopy data for the Brix degree prediction in apples with an R2-Score of 0.4
  – Built a semi-supervised learning based regression model for monitoring of *Lactococcus lactis* fermentation, resulting in 80% better performance
  – Identified major discrepancies in the data collection process using T^2 Hypothesis testing
  – Technologies Used: Python . Machine Learning . Statistical Analysis . NIR Spectroscopy . Research Documentation
- **AI Intern** — *Feb 2023 - Apr 2023*
  SecqurAIse Technologies Pvt Ltd — Bangalore, India
  – Implemented and optimized multi-modal YOLOv7 object detection algorithm using NVIDIA DeepStream AI Toolkit for detecting vehicles in a parking lot surveillance system
  – Led performance optimization and data curation using C++ and NVIDIA DeepStream AI Toolkit
  – Achieved a vehicle detection accuracy of 96%
  – Technologies Used: Python . NVIDIA · Deepstream AI Toolkit · Computer Vision · C++
- **Machine Learning Intern** — *Aug 2022 - Dec 2022*
  Tiny Banyan Technologies Pvt Ltd — Chennai, India
  – Pioneered detection of pot-holes and cracks on roads using YOLOv5 Algorithm
  – Set up and administered Google Cloud Platform for application testing with various road datasets
  – Trained new interns in ML deployment and model optimization.
  – Technologies Used: Python . Flask . Google Cloud Platform . Computer Vision
- **Theoretical Research Intern** — *May 2021 - Jul 2021*
  IIITDM Kancheepuram — Chennai, India
  – Devised new non-deterministic polynomial complete algorithms for tracing the Steiner trees in Interval and Halin graphs under guidance of Dr. Sadagopan N
  – Conducted comprehensive analysis on split, interval, and chordal graphs in various cases
  – Skills Used: Algorithm Analysis . Graph Theory . Literature Review

Projects

- **Drugs: Side Effects and Medical Conditions Analysis**
  Analyzed a pharmaceutical dataset, uncovering drug-condition-side effect links with 15% improved insights.
- **Human Artery-Vein Classification with U-Nets**
  Built a U-Net deep learning model to classify artery and vein segments, achieving 92% accuracy.
- **Social Distancing Monitor**
  Created a custom object detection model using HOG descriptors to track social distancing compliance in video footage.