Sai Ganesh Pala Shanmugam

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EDUCATION

Memorial University of Newfoundland **Expected: Jan, 2025**
Masters in Artificial Intelligence Newfoundland and Labrador, Canada

- Current GPA: 3.90/4.00
- Board Director for AI, Graduate Student Union (Nov 2023 – Nov 2024)

Amrita Vishwa Vidyapeetham **Graduated: July, 2023**
B.Tech, Computer Science Engineering with Artificial Intelligence Coimbatore, India

- GPA: 8.68/10.00
- Relevant coursework including: Mathematics for Intelligent Systems, Data Structures and Algorithms, Python for Machine Learning, Deep Learning for Signal and Image Processing & Reinforcement Learning.

WORK EXPERIENCE

Panlingua **May. 2022 – Aug. 2022**
Computational Linguist Intern for NLP Delhi, India

- Verified the creation of accurate language datasets by my team.
- Trained and compared machine learning as well as deep learning models for hate speech classification.
- Developed SVM and BERT models for English and Spanish text classification.

PUBLICATIONS

- IEEE Conference paper
  P S Sai Ganesh, Kabilan N, Adithan P, Sajith Variyar V V, Sowmya V, "Artificial Intelligence Framework for COVID protocol detection", 2022, International Conference on Computing, Analytics and Networks.

PROJECTS

AI-Driven Grocery Management System **Sept. 2024 – Nov. 2024**

- Developed a Faster R-CNN model for automatic text region detection in receipts, achieving an 81.2% F1-Score.
- Built a recipe recommendation system by training custom GPT-2 model on food.com data.
- Designed a privacy-compliant UI using Kivy for mobile, streamlining the integration of OCR and recommendation systems.

Skew Detection in Receipts using OCR **Sept. 2022 – Dec. 2022**

- Created custom datasets with 5 resolutions, accounted for data cleaning and validation.
- Compared state-of-the-art deep learning models to documenting results for the custom dataset.
- Models dealt with: ConvNext, Swin Transformer, ViT, Vgg19, MobileNet etc.

Deep Learning Architecture for PCG Classification **Nov. 2021 – Dec. 2021**

- Built a deep learning architecture that classifies PCG signals by converting them into images(spectrograms).
- Achieved a classification accuracy of 92.7%.
- Improved performance of existing architecture by utilizing both spectrogram and normalization together.

SKILLS & INTERESTS

- **Libraries:** Numpy; Matplotlib; Sci-kit learn; OpenCV; Pandas; Tensorflow; PyTorch; PyTesseract; Flask; Kivy;
- **Languages:** Python; Java; SQL; JavaScript; Ruby; Julia; MATLAB; HTML;
- **Soft Skills:** Teamwork; Time Management; Organized; Detail-Oriented; Communication Skills; Positive Learning; Critical Thinking;
- **Interests:** Badminton; Reddit; Gaming; Travelling; Music;