NAVEEN RAJU S G

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Github - https://github.com/naveenrajusg?tab=repositories | Recommendations - http://bit.ly/3QkDqD6
Portfolio - https://naveenrajusg.github.io/Portfolio/

SUMMARY

I am a seasoned professional with **4 years of experience in the field of Artificial Intelligence.** Proven track record in working on Machine Learning, MLOps, and Deep Learning/Computer Vision projects. I have also excelled in project leadership, Agile methodology, and technical instruction. I am seeking a full time, Co-Op or internship in the fields of Machine Learning, MLOPS, Deep Learning, Computer Vision, Data Science.

TECHNICAL SKILLS

Cloud : AWS (Amazon Web Services)
Programming languages: Python, R, C++, SQL
Deep learning framework: Keras, TensorFlow
Image processing libraries: Open CV, scikit-image
Other libraries: Numpy, Pandas, Matplotlib, scikit-learn
Version Control : Git and GitHub
Other relevant skills : MLOPS,Machine Learning, Deep Learning/Computer Vision, Convolutional Neural Network(CNN), Recurrent Neural Network(RNN), Long Short Term Memory(LSTM), Vision Transformer's, Object - Detection, Segmentation, Classification, image processing, Generative AI - LLM.

EDUCATION

Illinois Institute of Technology
Master of Science Artificial Intelligence - GPA : 3.833 / 4 **May 2024**
Courses : Machine Learning, Data Mining, Applied Statistics,Big Data Technologies, Data Preparation and Analysis, Computer Vision, Natural Language Processing, Deep Learning

Visvesvaraya Technological University, India
Bachelor of Engineering, Information Science and Engineering **July 2018**

WORK EXPERIENCE

Graduate Teaching Assistance - Data Mining course (Computer Science Department) **September 2023 - Present**

Engineer CL2-I (Samsung Electro-Mechanics Software India Bangalore Private Limited) **May 2021 – June 2022**

- Worked on a deep learning based number plate detection and character recognition algorithm with overall accuracy of 90%.
- Improved the accuracy of crowd detection and human trespass detection algorithms by 25%.

AI Engineer (Telerad Tech Pvt Ltd., India) **August 2018 – May 2021**

- Led a team of 4+ using the Agile software development method, including project planning, road map creation, release planning, sprint planning, and constant client interaction; assisted in developing proof-of-concept prototypes; removed project development bottlenecks; and instructed team members on technical topics such as deep learning and computer vision.
- Engineered a tailored U-Net architecture to achieve a remarkable 90% sensitivity and specificity in lymph node segmentation from mammograms.
- Devised a cutting-edge deep learning model and image processing logic, delivering an impressive 95% F1 score for detecting mammography asymmetry.
- Created a robust image processing algorithm and CNN classifier to effectively reduce false positives in mammograms' calcification detection, achieving an impressive 92% recall and 90% precision.
- Designed custom CNN architectures for precise segmentation and detection of various lung conditions, incorporating advanced image processing techniques for accurate localization and quantification. Achieved outstanding results with a 95% dice score, 90% MAP score, and an overall accuracy of 93%.

INTERNSHIP

AI-Intern (Telerad Tech Pvt Ltd, India) **July 2018**

- Tailored a deep learning architecture for precise mammogram lesion segmentation, augmented by advanced image processing techniques to enhance both specificity and sensitivity. Achieved exceptional results with an impressive 94% IOU score and an outstanding F1 score of 92.5%.

ACADEMIC PROJECT

- **Image classification using hierarchical based shifted window Vision Transformers :** Trained with various hyperparameter fine-tuning strategies for both the Hierarchical-Based Shifted Window Vision Transformer and standard Vision Transformers on the Food-101 dataset. Achieved competitive performance compared to the standard Vision Transformers, with reduced computational complexity.
- **Seismic image salt region segmentation** : Attained good seismic image salt region segmentation using a custom deep learning UNet backbone, surpassing ResNet 50, ResNet 101, and VGG16 with significantly fewer parameters (7.86x, 12.45x, and 5.73x reduction, respectively). Achieved IOU of 84.168 and F1 score of 81%.
- **Unpaired image-to-image translation using Cycle GAN** : Pioneered Cycle GAN, eliminating the need for paired data, thus enabling real-world applications with unaligned and unpaired training data. Achieved impressive results, including absolute mean square errors of 68.22 (Domain A to Domain B) and 91.73 (B to A), as well as SSIM scores of 87.86 (A to B) and 49.08 (B to A).

CERTIFICATIONS

AWS Certified Machine learning Speciality 2023 - Hands On! | **Generative AI with Large Language Models** | Neural Networks and Deep Learning | Improving Deep Neural Networks: Hyper parameter tuning, Regularization and Optimization | Convolutional Neural Network | Introduction to TensorFlow for Artificial Intelligence, Machine Learning and Deep Learning | Convolutional Neural Networks in TensorFlow | Sequence Models | Apache Airflow | Apache Spark

PUBLICATIONS

- Pneumothorax Detection and Classification on Chest Radiographs using Artificial Intelligence - Lattice the Machine Learning Journal Volume-2 Issue-1, ISSN 2582-8312 **January - March 2021**
- Pneumonia Detection and Classification on Chest Radiographs using Deep Learning - Lattice the Machine Learning Journal Volume-2 Issue-2, ISSN 2582-8312 **April - June 2021**