

PRIYA PRABHAKAR

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OBJECTIVE

MSc in Computer Science (AI specialization) with 4+ years at ISRO and recent AI roles in LLM fine-tuning, medical imaging, and real-time computer vision. Strong track record in training and optimizing deep learning models across healthcare, space, and commercial domains. Experienced as an AI Trainer for Reinforcement Learning with Human Feedback (RLHF), with the ability to distill complex AI concepts into digestible, engaging formats for learners. Skilled in PyTorch, TensorFlow, and OpenAI tools, with a passion for building interpretable and accessible AI solutions.

SKILLS AND ABILITIES

- **Programming Languages:** Python, C, C++, Java
- **ML Frameworks & Libraries:** PyTorch, TensorFlow, Scikit-learn, Keras, OpenCV, Flower, SimpleITK, PyDIP, MONAI
- **Tools:** Docker, Kubernetes, Git, Microsoft Azure, MATLAB, AWS, SQL, Linux, PowerBI
- **Specialization:** Machine Learning, Deep Learning, NLP, LLM, Reinforcement Learning, Computer Vision, Image Processing, Medical image Analysis, Data Analysis, Data Visualization, CI/CD, MLOPs, Multimodal
- **Soft Skills:** Problem-Solving, Critical Thinking, Analytical, Communication, Creative, Teamwork
- **Language:** English, Hindi

EXPERIENCE

Freelance AI Engineer | Leiden, Netherlands

04/2024 - Current

- Worked extensively with **Large Language Models (LLMs)** to train and optimize AI-generated outputs.
- Developed **real-time object detection** and tracking solutions for industrial and commercial applications.
- Evaluated and trained responses for LLMs using **Reinforcement Learning with Human Feedback (RLHF)** as AI trainer.
- Built custom **AI applications** for clients using Python, TensorFlow, PyTorch, and OpenAI APIs.

AI Engineer Intern | Surgical Reality | Nieuw-Vennep, Netherlands

07/2023 - 03/2024

- Developed a Deep learning pipeline for thoracic aorta segmentation (UNet and transformers achieving **94.6% Dice score** for DICOM CT images).
- Collaborated with Leiden University and Erasmus MC cardiac surgeons to integrate AI models into clinical workflows.
- Built **AR-based 3D visualization** modules to enhance pre-surgical planning for TEVAR.
- Applied advanced preprocessing and hyperparameter tuning to optimize model performance.

Scientist/Engineer | ISRO | Thiruvananthapuram, India

08/2017 - 08/2022

- Developed **AI-driven telemetry format validation software** using CI/CD pipeline and MLOps to verify sensor file formats, reducing errors by 30%. This required critical thinking to troubleshoot complex issues with the embedded system's data pipeline and ensured accuracy for 17 launch campaigns.
- Designed **Python-based automation** tools for data analysis of upper stage electronics, leveraging machine learning algorithms to reduce review time by 45% and enhance troubleshooting.
- Published telemetry format validation research in the "Journal for Aerospace Quality and Reliability". Enhanced pre-launch and post-flight data analysis for the **Chandrayaan mission** using machine learning algorithms, ensuring data precision and mission reliability.

Intern | NRSC (ISRO) | Hyderabad, India**06/2016 - 07/2016**

- Optimized machine learning models for land feature classification on **ASTER geological datasets**, achieving a 98% accuracy through advanced hyperparameter tuning.
- Conducted a comparative study of **Backpropagation Neural Networks and SVM**, improving feature extraction accuracy in geospatial imaging.

Intern | DRDO | Hyderabad, India**11/2015 - 12/2015**

- Designed and developed **Robust Roll Autopilot** using Extended State Observer in MATLAB to control roll movement in tactical missile.

EDUCATION

Master of Science in Computer Science**(Specialization in AI) | Leiden University | Leiden, Netherlands****02/2022 - 03/2024**

- Focused on cutting-edge research in **Image Processing** and **Artificial Intelligence** to complete the thesis on 'Aorta segmentation and its geometric analysis'.
- Relevant Courses: Reinforcement Learning, Deep Learning, Machine Learning, NLP, Image Processing and Evolutionary Algorithms.

Bachelor of Technology | IIST | Thiruvananthapuram, India**08/2013 - 03/2017**

- Received Department of Space, **Govt. of India Scholarship** for exceptional academic performance during Bachelors.
- Developed an innovative **Computer-Aided Diagnosis (CAD) system** using automated Convolutional Neural Networks (CNN) to accurately detect and categorize breast masses as benign or malignant, with findings presented in a published paper at an **DSAA International conference**.

PUBLICATIONS

- "Towards Telemetry Format Verification of Launch Vehicle," Journal for Aerospace Quality and Reliability, 2019
- "Towards Automated Breast Mass Classification Using Deep Learning Framework," IEEE DSAA, 2019.

EXTRA-CURRICULAR ACTIVITIES

Video Editor | Leiden University | Leiden, Netherlands**07/2023 - 03/2024**

- **Filmed, edited, and produced high-quality video content** to support university teaching staff, enhancing student engagement through well-structured introduction videos.

Cultural Events Organizer | IIST | Thiruvananthapuram, India**08/2013 - 03/2017**

- **Led the planning and execution** of "Konchords", a monthly cultural event, fostering student engagement and collaboration, enhancing organizational, leadership, and communication skills.