Mynampati Sri Ranganadha Avinash

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Research Focus & Objective

AI & Deep Learning researcher with expertise in Computer Vision, Model Optimization, and Hyperparameter Tuning. Currently optimizing hyperparameters using Bayesian Optimization (BILBO) at EPITA, France. Experienced in Deep Learning frameworks (TensorFlow, PyTorch), model inference optimization (TensorRT), and large-scale AI model training. Passionate about efficient deep learning deployment, AI fairness, and scalable ML systems.

Education

EPITA School of Computer Science, Paris, France Jan 2025 - Apr 2025
MSc in Data Science (Exchange Semester)
Presidency University, Bangalore, India Nov 2021 - Aug 2025
BTech in Computer Science & Engineering (Specialized in Data Science) GPA: 8.50/10
Jupiter Jr College, Guntur, India June 2021
Secondary Education Percentage: 93.9%

Research Experience

Research Project: Developed an **AI-powered patient-doctor matching system** for optimizing **healthcare resource allocation**.

- Engineered **symptom-driven medicine recommendation models**, enhancing **clinical decision-making**.
- Applied **NLP & predictive modeling** to classify patient cases based on diagnosis patterns.
- Published findings in **IJIRCCE (Vol. 13, Issue 1, 2025)**, demonstrating real-world AI applications in healthcare. **Publication DOI: 10.15680/IJIRCCE.2025.1301064**

Research on Hyperparameter Optimization using BILBO vs. Bayesian Optimization at EPITA, France
Objective: Investigating **Bayesian Optimization & BILBO** for **hyperparameter tuning in ML models**.

- Optimized **Decision Trees & Logistic Regression** using **BILBO and Standard Bayesian Optimization**.
- Conducted **empirical comparisons** to benchmark tuning efficiency across real-world datasets.
- This research evaluates BILBO's efficiency in hyperparameter tuning compared to traditional Bayesian Optimization, demonstrating improved model convergence.

Outcome: Preparing findings for publication in **ML & AI Optimization journals**.

Publications

MediMatch: AI-Powered Patient-Doctor Matching System published in IJIRCCE, Vol. 13, Issue 1, pp. 458-463
Authors: Mynampati Sri Ranganadha Avinash, et al. **DOI: 10.15680/IJIRCCE.2025.1301064**

Internship Experience

Data Science Intern- Aviana Coaching Academy, India July 2023 – Present

- Built automated ETL pipelines using Python, Pandas, AWS Lambda, enabling and SQL, for real-time student performance tracking.
- Applied **NLP-based sentiment analysis** on student feedback to optimize **marketing strategies & engagement**, increasing student retention rates.

Projects

Identifying Faces from Images (Deep Learning) Project Overview Developed a **CNN-based facial recognition model** using **DeepFace & Face Recognition Library** for automated **attendance tracking & identity verification**.
Key Contributions:

- Implemented **face encoding & classification techniques**, optimizing **detection accuracy and robustness** in varying lighting conditions.
- Applied to **real-world use cases**, including **automated workforce attendance systems, security monitoring, and identity verification in financial services**.

YOLOv5 Training for Object Detection

- Trained YOLOv5 for object detection on the Cityscapes dataset.
- Optimized model performance using TensorRT for GPU inference acceleration.
- Implemented OpenCV for real-time detection in video streams.

Stock Market Volatility Prediction (NVIDIA Stock)

- Built a time-series forecasting model for NVIDIA stock price volatility using LSTM GRU.
- Designed a financial AI system for investment risk analysis.
- Integrated the model with AWS Lambda FastAPI for real-time inference.

Skills & Tools

- **Programming:** Python (TensorFlow, PyTorch, ONNX, Darknet, OpenCV, NumPy, Pandas)
- **Deep Learning:** Convolutional Neural Networks (CNNs), YOLO, LSTM, Transfer Learning
- **Model Optimization Deployment:** TensorRT, OpenVINO, ONNX, FastAPI, AWS Lambda
- **Computer Vision:** OpenCV, Face Recognition, Object Detection, Image Segmentation
- **Machine Learning AI:** Bayesian Optimization, Decision Trees, SVM, XGBoost

Certifications

Machine Learning Operations (MLOps) for Generative AI - Google Credential ID: **11429958**
Gemini for Data Scientists and Analysts - Google Credential ID: **11454738**
Develop GenAI Apps with Gemini and Streamlit - Google Credential ID: **11455241**

Leadership & Extracurriculars

Chartered Secretary Rotaract Club, Bangalore Oasis (2024 - Present)

- Organized **f**undraisers for orphanages & senior citizen homes.
- Demonstrated **leadership through organizing STEM education** initiatives and community outreach programs, Led **awareness campaigns & blood donation drives**, mobilizing large-scale participation.

Team Leader Innovative IoT Projects, Presidency University (2022 – 2023)

- Developed **Smart Glasses for the Blind** using **Arduino & ultrasonic sensors**.
- Built a **face recognition-based vehicle starter** using **Raspberry Pi & OpenCV**.