SARAH PENDHARI

Mumbai, India

+91-7977815264 ✉ sarahpendhari@gmail.com 🔗 LinkedIn GitHub 🔗 Portfolio M Medium Ⓓ ORCID

Education

Thadomal Shahani Engineering College Mumbai, India
Bachelor of Engineering in Computer Engineering cum laude, **CGPA: 9.144** (Till Sem 7) December 2021 – July 2025

Experience

Outlier AI October 2024 – March 2025
Freelance AI Contractor San Francisco, California
- Conducted large-scale LLM evaluations, optimizing performance metrics and ensuring deployment readiness.
- Designed robust feedback loops to refine model outputs, enhancing contextual accuracy and reliability.

M.H.Saboo Siddik College of Engineering January 2022 – March 2025
Research Intern Byculla, Mumbai
- Developed ColourViTGAN, a novel image colourization model integrating Vision Transformers (ViT) with CycleGAN
- Achieved **PSNR of 22.659** and **SSIM of 0.928** on the Places365 dataset, outperforming SOTA methods in handling complex scenes.

Headstarter AI July 2024 – September 2024
Software Engineer Fellow Long Island City, New York
- Developed an AI Customer Support chatbot using **Google's GenAI API**, deployed on Streamlit, optimized for user engagement and latency
- Added multi-language support, user authentication, and feedback mechanisms, via **LangChain** and **LLMs**.

IIT Bombay June 2024 – August 2024
Summer Intern Powai, Mumbai
- Developed a data monitoring system for Powai Lake using sensors, LoRa, and ESP32; integrated data visualization with ThingsBoard and Firebase
- Designed a weather forecasting algorithm for Mumbai with **32%** better accuracy than existing ones.

Wondrlab India Pvt Ltd. June 2023 – September 2023
Software Developer Intern Bandra, Mumbai
- Applied Python and ML techniques to enhance data cleaning, preprocessing, ETL pipelines, and data visualizations by **9.2%** in efficiency; developed advanced web scrapers, and led diverse software projects.

Publications

Benchmarking Deep Learning Models for Automated MRI-based Brain Tumor Detection: In-Depth Analysis of CNN, VGG16, VGG19, ResNet-50, MobileNet, and InceptionV3 *International Journal of Computer Applications* November 2024, Link

ColourViTGAN: A Hybridised Approach Using Vision Transformers and CycleGAN to Add Color to Greyscale Images *IEEE Xplore (ICEC-2024)* January 2025, Link

Attention-Enhanced Prototypical Networks for Few-Shot Microaneurysm Detection in Diabetic Retinopathy Images *IEEE Xplore (IATMSI-2025)*, Presented, To be Published

Advanced Neural Network-Based Color Transformation for Enhanced Visual Perception in Tritanopia Using Deep Learning Algorithms *Taylor and Francis*, Submitted October 2024

Technical Skills

Programming Languages: Python, C++, R, Java, MATLAB
ML and AI Libraries: TensorFlow, PyTorch, Scikit-Learn, Keras, OpenCV, spaCy, Transformers, NLTK
Databases: SQL, MongoDB, Cassandra, Firebase

Leadership / Extracurricular

Google Developer Student Club (TSEC) – *Core Committee Member* Aug 2022 – Aug 2024
- Led team of **15**, organized **20+** events, secured funding, and managed branding & outreach initiatives.

Medium – *Technical Writer* Jan 2022 – Present
- Authored **21+** technical articles engaging diverse audience through insightful content.

Awards

- **Principal's Excellence Award** Granted to the top meritorious students of BE TSEC for outstanding excellence.
- **Best Paper Award at IEEE (IATMSI-2025)** Awarded **1st** Position in AI/ML track for research on fundus images.
- **Invited Speaker - Geospatial Computing** Delivered a session on "Data Visualization and Management in Geospatial Systems" in an online STTP Session at TSEC.
- **Best Paper Award at IEEE (ICEC-2024)** Recognized among **80+** teams for exceptional research quality and presentation.
- **Youngest Genius Award by Microsoft for Startups (2022)** Awarded for winning a national-level hackathon.