LOHIT GANDHAM

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Career Objective

Aspiring to excel in the domain of Artificial Intelligence, I am passionate about harnessing the power of machine and deep learning to merge AI with edge computing, creating pioneering, energy-efficient solutions for health, governance, and the environment. Committed to innovation through biologically inspired algorithms and intelligent systems, I aim to drive sustainable technology advancements that reflect the efficiency and adaptability of natural systems.

Educational Details

Degree	Board / University	Year of Passing	Percentage / CGPA
Master of Science (MSc) – Computer Engineering and Embedded Systems (CESE)	Technical University of Delft (TU Delft)	2024	8.35 out of 10 Thesis Grade: 9 (Best MSc Graduate Award)
Bachelor of Technology (B. Tech) – Electronics and Communication Engineering (ECE)	Amity University, Noida	2021	9.46 out of 10 (Batch topper)
Class XII	Board of Intermediate Education, Andhra Pradesh	2016	92.5 %
Class X	Central Board of Secondary Education	2014	9.0 out of 10

Projects

- Power-Efficient Two-Step Data Compression and Distributed Computing System for Extreme-Edge Devices using Spiking Neural Networks under the European Research Council (ERC), 2024 (Thesis Grade: 9, Best MSc Graduate Award)
- Cross-Language Communication Enhancement using Transformer Models for Real-Time Translation on Cloud Platforms, 2024.
- Voice & Vision assistant using OpenAI Real-Time API and Llama open-source vision models, with AI agents and dynamic function calling using WebRTC-based LiveKit framework, 2024.
- Utilizing Spatial Data Science Techniques to Uncover Healthcare Vulnerabilities in the City of Rotterdam, 2024.
- Finger velocity Decoding with In vivo neural data using Efficient Spiking Neural Networks, 2023.
- Implemented Mobile Applications using Java, Featuring Algorithms for KNN, Bayes, and Particle Filter for Human Activity Detection, 2023.
- Developed a drone-based system for deforested land detection using YOLO v3 and automated seed dispersal with APM 2.8 and Raspberry Pi, 2021.

Awards and Achievements

- Awarded **Second Prize in the "Best MSc Graduate Awards"** at Delft Bioengineering Institute, 2024.
- Topper of my batch in Electronics and Communication Engineering, 2017-21.
- Awarded silver medal in NPTEL online certification course on "Principles of Signals and Systems" (in top 5 % certified candidates), 2018.

Research and Publications

- Defended my Master's Thesis – "Neuromorphic compression and distributed computing for on-implant neural signal processing in BCI" under the European Research Council (ERC).
  link: https://repository.tudelft.nl/record/uuid:edb117cf-eac0-4a9e-9e4b-dd90963be03f

- Presented and published a paper titled "Reforestation Using Drones and Deep Learning Techniques" accepted and published at 7th International Conference on Advanced Computing and Communication Systems (ICACCS) – IEEE,2021.
  doi: https://doi.org/10.1109/ICACCS51430.2021.9442053
- "Seed Dispenser using Drones and Deep Learning Techniques for Reforestation"- accepted and published at 5th International Conference on Computing Methodologies and Communication (ICCMC) – IEEE,2021.
  doi: https://doi.org/10.1109/ICCMC51019.2021.9418227
- "Early Detection of Foot Pressure Monitoring for Sports Person Using IoT" accepted and published in Advances in Machine Learning and Computational Intelligence - Springer Professional,2021.

  doi: https://doi.org/10.1007/978-981-15-5243-4

Work Experience

- Worked as Graduate Research Assistant at IMEC Eindhoven, in the field of Spiking Neural Networks based Brain Computer Interfaces (BCIs) (Sep 2023 – Aug 2024).
- Worked as a Teaching Assistant for the courses Digital Signal Processing and Computer Organization and Architecture at TU Delft. (Nov 2023 – Feb 2024).
- Worked at Accenture as an Application Development Associate (Aug 2021 – June 2022).
- Interned at Ajeevi Smart Technologies Private limited - Made a system for "Monitoring Health Parameters of COVID -19 Patients" using IoT based solutions, (wMay 2020 – July 2020)

Technical Skills

- Proficient with Python (NumPy, Keras, Tensorflow, snntorch, Livekit and FastAPI), C, C++, Rust, VHDL and Verilog programming languages.
- Proficient with LLM Orchestration frameworks like LangChain and Pydantic.
- Proficient in DevOps and CI/CD tools such as GitActions & Jenkins, with expertise in containerization using Docker.
- Proficient with LPC1343, Arduino and Raspberry pi APM 2.8 and KK 2.1 boards.

Extra-Curricular Activities

- Member of two NGO'S - Mukti Foundation and JAX Foundation, 2020-21.
- Coordinator of the Signal and Processing Club at Amity University,2020-21.
- Student Organizer in the Signal Processing and Integrated Networks International Conference (2018 and 2019).

Areas of Interest

- Machine and Deep Learning Algorithms.
- GenAI and MLOps.
- Hardware AI and Emerging Technologies (RRAMs).
- Digital Design and FPGA development.
- Quantum Computing.
- Robotics (with emphasis on legged robots, aerial robots and autonomous systems).

Languages Known

Language	Listening	Speaking	Reading	Writing
English	✓	✓	✓	✓
Hindi	✓	✓	✓	✓
Telugu	✓	✓		
German	✓		✓	✓