

Divyayan Dey

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Education

KTH Royal Institute of Technology, Master's in Electrical Engineering Aug 2024 – Jun 2026

- **Specialization:** Information and Network Engineering
- GPA: 4.19/5.0

University of Calcutta, Bachelors in Electronics and Communication Engineering Jul 2017 – Aug 2021

- GPA: 9.14/10.0
- **Final Year Dissertation:** A Machine Learning Assisted Smart Health Monitoring Console with Signal Quality Assessment Module (*with Raspberry Pi and Arduino*)

Professional Experience

Master Thesis Worker, Scania Group AB – Södertälje, Sweden Jan 2026 – present

- Designing and training computer vision models for human action temporal segmentation through video understanding
- Building systems to model human-object relationships and assembly procedures, in industrial assembly videos
- **Tools used:** PyTorch, Python, AWS EC2/S3, and many more

AI/ML Intern, Filed AB – Stockholm, Sweden Jun 2025 – Jul 2025

- Built ML modules for e-doc text recognition and document checklist generation through OCR & LLM agents
- Built LLM wrappers and web UI for user-friendly custom prompting to generate document filebases with as much accuracy as possible
- **Tools used:** Pandas, GPT APIs, PostgreSQL, FastAPI, inngest

AI/ML Computational Science Analyst, Accenture – Bangalore, India Sep 2021 – Jul 2024

- ML-led content production modules for AI-led generation and robotic process automation, involving text processing and metadata extraction, reducing production time from ≈ 20 mins to ≈ 20 seconds
- Computer Vision/Image processing, VLMs (CLIP etc.), text analytics solutions for segmentation & automated QA
- Applied Generative AI for text and image content production/manipulation in enterprise products via LLM prompt engineering and model fine-tuning; also piloted LLM assisted financial analysis report generation
- **Tools used:** PyTorch, Pandas, Tensorflow, Scikit-learn, Langchain, OpenCV, GPT APIs, PostgreSQL, Flask, Linux

Publications

A Single Qubit Quantum Perceptron for OR and XOR Logic Mar 2022

Chaurasiya R., **Divyayan Dey**, Rakshit T., Bhattacharyya S.

Intelligence Enabled Research. Springer, Singapore, 2022. 133-145. DOI : 10.1007/978-981-19-0489-9 11

Patents

Generation and Optimization of Output Representation - D22-074-04509-PR-US 2022

Tata S., Chaudhari K., Mathew D., Sridharan S., Guggilla C., Shukla H., **Divyayan Dey**

Projects/Research Experience

Authentic Talking Face Video Generation via Deep Learning (2025)

- Generated temporal evolution of talking human faces in videos, with good fidelity and high authenticity
- Enhanced CNN model performance with enhanced motion and occlusion maps, to enhance LPIPS/DISTS metrics

Multimarginal Flow Matching with Noisy Interpolants for Prediction (2025)

- CNNs for feature extraction from high resolution Whole Slide Images/distributions
- Transformers (and ViTs) for feature aggregation, including spatial transcriptomics

Skills

Programming: Python, Java, MATLAB, C/C++, MS SQL, PostgreSQL, HTML, Flask, Azure DevOps, Git, Docker

Hardware Exposure: Raspberry Pi, Arduino, 8085 Microprocessor