# MOHIMINUR RAHMAN KHAN SHIKTO

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## SUMMARY

Electronics and Telecommunication Engineering undergraduate with a strong foundation and strong handson experience in machine learning (PyTorch/TensorFlow), MLOps, and VLSI/physical design using Cadence Virtuoso. Comfortable building end-to-end AI pipelines, model training and working with EDA flows. Eager to contribute in fast-paced, AI or semiconductor focused teams.

## PROJECT

### AI Driven Question Answering System – SemEval 2024 (Top 50/300+ teams)

- Led a 4-member team to design a tabular QA pipeline; boosted answer accuracy to 87 % using SLM.
- Managed iterative model refinement workflows through daily synchronization using Python and PyTorch, adjusting hyperparameters in response to experimental findings and evaluation feedback.

### 3x8 CMOS Decoder

- Designed a 3x8 CMOS decoder as well as did transient analysis of the design in Cadence Virtuoso.

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### BhashaJog: Translation from Chatgaiya Bangla to Standard Bangla

- Created a workflow to process Chatgaya Bangla text for translation stages using an m2m-100 pretrained neural model, applying Python and NLP toolkits.

### Paraphaser-GAN Generative Adversarial NLP

- Re-implemented and extended DivGAN for diverse Bangla paraphrase generation (GitHub)

### Intelligent Prognostics for Rolling Element Bearing Faults

- Developed and trained convolutional neural networks (CNNs) in Python and PyTorch to predict faults in rolling element bearings, utilizing vibration and sensor data for maintenance scheduling.
- Prepared technical documentation and shared research findings through a peer-reviewed conference publication.

### Patch Based Image denoising Using GAN

- A project inspired from the paper "Fractal Generative Networks".

### Hybrid Fractal Inspired GAN For Real Life Image Denoising (Thesis)

- Developed a hybrid Generative Adversarial Network for real-life image denoising by integrating fractal expansion rules within the generator to enhance multiscale detail recovery using Python and PyTorch.

## EDUCATION

### Bachelor of Science in Electronics and Telecommunication Engineering

Chittagong University of Engineering and Technology (CUET) · Chittagong, Bangladesh · 2025 · 3.52

## INVOLVEMENT

### NASA Space Apps Challenge 2024 – National Finalist:

Chittagong University of Engineering and Technology (CUET),

- Collaborated in a multidisciplinary team, leveraging skills in data analysis, digital design, and application prototyping to present the project and advance to the national finalist stage.

### Organizing Secretary, CUET Photographic Society

Chittagong University of Engineering and Technology (CUET),

- Manage budget and logistics for 6+ campus-wide events; grew membership 40 %.

### Joint General Secretary, Supply Chain & Business Alliance CUET

Chittagong University of Engineering and Technology (CUET)

- Liaise with HR teams of firms (e.g., Shanta Asset Management) to secure internships & workshops.

## SKILLS

Digital Design and Architecture: Verilog HDL, SystemVerilog, Quartus Prime, ModelSim-Altera.

VLSI: Cadence Virtuoso (Schematic, Layout, ADE XL), Assura DRC, LVS, RCX, Transient Analysis.

Programming: Python (PyTorch, OpenCV, NLTK, Scikit-Learn), C/C++, MATLAB.

Machine Learning: Supervised Learning, Large Language Models, Deep Neural Networks

EDA & Simulation: EDA Playground, Logisim, Proteus.