

# Md. Morsalin

Dinajpur-5200, Bangladesh

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📄 [/profile/Md-Morsalin-7](https://github.com/Md-Morsalin-7)

## SUMMARY

Currently pursuing B.Sc.(Engineering) in Electrical and Electronic Engineering at Hajee Mohammad Danesh Science and Technology University, with a strong academic record (CGPA above 3.80). Passionate about research in renewable energy, power electronics, and Hybrid Electric Vehicle (HEV). Skilled in MATLAB, Simulink, DFT, SCAPS-1D, PSCAD, PLECS and OriginPro; actively engaged in research projects with faculty members and collaborators. Dedicated to continuous learning and innovation, with aspirations for higher studies.

## EDUCATION

**Bachelor of Science (Engineering)** in Electrical and Electronic Engineering  
Hajee Mohammad Danesh Science and Technology University, Dinajpur-5200, Bangladesh  
📅 January 2022 - Present [Expected date of graduation: **August 2026**]  
**Result:** final year ongoing: CGPA 3.84 out of 4 (upto 3rd year)

## EXPERIENCES

**Research Intern**  
**UniV** [Research and Development (Science School) Unit]  
📅 May 2025 - November 2025 [[Credential](#)]

## RESEARCH INTERESTS

Renewable Energy, Hybrid Electric Vehicle (HEV), Power Electronics

## TECHNICAL SKILLS

<b>Programming languages:</b>	MATLAB	Python	C	C++
<b>Software Tools:</b>	Simulink, PLECS	PSCAD	DFT, SCAPS-1D	OriginPro
<b>Writing Tools:</b>	LaTeX	MS word	PowerPoint	MS excel

## PUBLICATIONS

- **Md. Morsalin**, Ragab A. Sayed, Md. Sazedur Rahman, Md. Ferdous Wahid, Mohammad Salah, "Performance Investigation and Efficiency Enhancement of Eco-friendly Tin-based  $\text{CH}_3\text{NH}_3\text{SnI}_3$  Perovskite Solar Cell Via SCAPS-1D", *IJUM Engineering Journal*, 27(1),2026. doi: [10.31436/iiumej.v27i1.3898](https://doi.org/10.31436/iiumej.v27i1.3898)
- Rony Tota, Tarikul Islam Tasin, Shak Mahmudul Hasan, **Md. Morsalin**, Md. Zamil Sultan, Md. Muien Ahmed Arnob, Mehedi Hasan Tanim, Najiba Abedin Sajan, "Performance Enhancement of Lead-Free  $\text{K}_2\text{TiI}_6$ -Based Perovskite Solar Cells Using SCAPS-1D Simulation Study", *Journal of Materials Science and Chemical Engineering*, Vol.13 No.10, Oct 2025, doi: [10.4236/msce.2025.1310002](https://doi.org/10.4236/msce.2025.1310002)
- Md. Sazedur Rahman, Ibnul Zarrah, **Md. Morsalin**, Md. Moshiur Rahman, Pritom Mojumder, "Area-Efficient FPGA Implementation of Elliptic Curve Point Multiplication for Cryptography", *2025 2nd International Conference on Next-Generation Computing, IoT and Machine Learning (NCIM)*,Gazipur, Bangladesh, 2025, pp. 1-5, doi: [10.1109/NCIM65934.2025.11160183](https://doi.org/10.1109/NCIM65934.2025.11160183).
- Rony Tota, Tarikul Islam Tasin, **Md. Morsalin\***, Ragab A. Sayed, Sheeraz Iqbal, Shak Mahmudul Hasan, Md. Zamil Sultan, and Md. Muien Ahmed Arnob, "Performance Improvement of Lead-Free  $\text{CsSnCl}_3$ -Based Perovskite Solar Cell Using Multiple ETLs: A SCAPS-1D Simulation Study", *Clean technologies and recycling*, 2026, 6(1): 33-55, doi: [10.3934/ctr.2026002](https://doi.org/10.3934/ctr.2026002)

- Mohammed A Albadrani, Ragab A. Sayed, Sabry Allam, **Md. Morsalin**, Hossam Youssef Hegazy, Samia Abdel Fattah, and Mohamed H. Abdelati "Performance Comparison of Intelligent Energy Management Strategies for Hybrid Electric Vehicles with Photovoltaic Fuel Cell and Battery Integration" *batteries* [**Accepted for Publication**].
- Rony Tota, **Md. Morsalin**, and Ragab A. Sayed, "Performance Investigation of Robust Fixed Diagonal Loading-Based Narrowband Near-Field Optimal Beamformer", *JES. Journal of Engineering Sciences* (**Manuscript under review**)
- Muhammad Usman, Babar Hussain, **Md. Morsalin\***, Muhammad Zeeshan, Muhammad Rasheed, Ragab A. Sayed, Ayman Flah "Dynamic Stability Enhancement of High-Renewable Energy Penetration Power System Using Coordinated Support Mechanisms", *Electrical Engineering* (**Manuscript submitted**)
- **Ongoing Research** "Performance Assessment of Perovskite Absorber CsSnI<sub>3</sub>-based Solar Cells via SCAPS-1D and MATLAB"
- **Ongoing Research** "A Comprehensive Performance Analysis of an Eco-Friendly Cs<sub>2</sub>AgAuBr<sub>6</sub>-Based Double Perovskite Solar Cells: DFT And SCAPS-1D Simulation Approach"
- **Ongoing Research** "An extensive charge transport layer optimization of eco-friendly Sn-based Cs<sub>2</sub>AgInBr<sub>6</sub> double perovskite solar cells via SCAPS-1D"

## CONFERENCES

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- **Md. Morsalin**, Md. Sazedur Rahman, Md. Ferdous Wahid, "Performance analysis of WSe<sub>2</sub>-based heterojunction solar cell with non-toxic ZnSe buffer layer: A numerical simulation approach", *Global Students Research (GSR) Conference*, February 4-6 2025, KFUPM, Dhahran, Saudi Arabia. [**Credential**]
- Ragab A. Sayed, Sabry Allam, **Md. Morsalin**, Mohammad Salah, "Theoretical Analysis of the Performance of a Hybrid Fuel Cell/Battery Powertrain Test Bench for Automotive Applications", *2025 IEEE International Conference on Power, Electrical, Electronics and Industrial Applications (PEEIACON)*, 04-05 December 2025, Southeast University (SEU), Dhaka, Bangladesh. [**Credential**]
- **Md. Morsalin**, Ragab A. Sayed, "Optimizing the Energy Management System of a Photovoltaic Fuel Cell Battery Hybrid Electric Vehicle using PID Control System", *IEEE CS BDC Summer Symposium*, July 18-19 2025, HSTU, Dinaajpur, Bangladesh. [**Credential**]
- **Md. Morsalin**, Md. Sazedur Rahman, Md. Ferdous Wahid, "Performance Analysis of WSe<sub>2</sub>-based Thin-film Solar Cell with Non-toxic ZnSe Buffer Layer Using SCAPS-1D Simulation Approach", *First International Conference on Sustainable Energy Systems (ICoSES-2025)*, April 24-26, 2025, El Jadida, Morocco. [**Credential**]
- Md. Sojibur Rahman, Md. Sazedur Rahman, **Md. Morsalin**, "Performance Analysis of Lead-free Cs<sub>2</sub>PtI<sub>6</sub>-Based Double Perovskite Solar Cell With and Without Hole Transporting Layer Using SCAPS-1D Simulation Software", *First International Conference on Sustainable Energy Systems (ICoSES-2025)*, April 24-26, 2025, El Jadida, Morocco.

## HONORS AND AWARDS

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- **Dean's List Award**  
Received for 2nd year academic excellence, achieved CGPA above 3.75 in both semesters.  
**Issued by:** Faculty of Computer Science and Engineering (CSE)  
Hajee Mohammad Danesh Science and Technology University, Dinaajpur-5200, Bangladesh
- **Conference and Travel grants**  
Received from *Global Students Research (GSR) Conference 2025*  
Issued by: KFUPM, Saudi Arabia. [**Credential**]
- **Dean's List Award**  
Received for 1st year academic excellence, achieved CGPA above 3.75 in both semesters.  
**Issued by:** Faculty of Computer Science and Engineering (CSE) [**Credential**]  
Hajee Mohammad Danesh Science and Technology University, Dinaajpur-5200, Bangladesh

- **Best Working Star Award**  
Received from *3rd International Poster Competition for Young Researchers 2025*  
Issued by: UniV [[Credential](#)]

## LANGUAGES

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- English (**Duolingo** score 130)  
Professional working proficiency

## LEADERSHIP AND VOLUNTEERING

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- **Venture Craft KFUPM**  
Position: **Global Ambassador** [ID: 45]  
March 2026 – Present
- **IEEE Power and Energy Society (PES) HSTU SBC**  
Position: **Chair**  
Feb 2025 – Jan 2026
- **IEEE Photonic society HSTU SBC**  
Position: **Vice Chair**  
Feb 2025 – Jan 2026
- **IEEE PES DAY 2025**  
Position: **Ambassador** [ID: IEEEPESDAY274]  
Mar 2025 – April 2025

## LICENSES AND CERTIFICATIONS

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- **GSR conference 2025**  
Certificate of Appreciation  
Issued Feb 2025, [KFUPM](#)
- **Simulink Onramp**  
Issued Jan 2025, [MathWorks](#)
- **MATLAB Onramp**  
Issued Dec 2024, [MathWorks](#)
- **Intermediate Python**  
Issued Nov 2024, [DataCamp](#)

## PROFESSIONAL MEMBERSHIPS

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- **IEEE (Institute of Electrical and Electronics Engineers)**  
Student Member (Feb 2025 – Present)  
Member number: 101071134  
[Certification](#)
- **IEEE Power and Energy Society (PES)**  
Member (Feb 2025 – Present)  
[Certification](#)
- **IEEE Photonic Society**  
Member (Feb 2025 – Dec 2026)  
[Certification](#)

## SEMINARS

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- **Speaker**, Seminar on "GETTING STARTED WITH RESEARCH AT UNDERGRADUATE: Insights from the student-led Global Students Research (GSR) Conference", Organized by *IEEE HSTU SB*, April 24, 2025, HSTU, Dinaajpur-5200, Bangladesh.

## REFERENCES

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[1] **Rony Tota**

Assistant Professor

Department of Electrical and Electronic Engineering (EEE)

Faculty of Computer Science and Engineering (CSE)

Hajee Mohammad Danesh Science and Technology University, Dinajpur-5200, Bangladesh.

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[2] **Md. Ilius Hasan Pathan**

Assistant Professor

Department of Electrical and Electronic Engineering (EEE)

Faculty of Computer Science and Engineering (CSE)

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