

Md Moksedur Rahman

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PROFESSIONAL PROFILE

PhD Researcher in Computer Science at University of Essex with 11+ years of experience in software engineering, AI, and data-driven systems. Skilled in Python, machine learning, EEG analysis, deep learning, and explainable AI for healthcare applications. Experienced in backend development, scientific research, and collaborative problem-solving, with a strong interest in biomedical signal analysis and intelligent healthcare technologies.

CORE SKILLS

Programming: Python, Java, SQL, MATLAB

AI & Machine Learning: PyTorch, TensorFlow, Machine Learning, Deep Learning, Explainable AI

Data & Signal Processing: EEG Analysis, Time-Series Analysis, Feature Engineering

Software Engineering: Spring Boot, REST APIs, Git, Linux

Professional Skills: Problem Solving, Critical Thinking, Team Collaboration, Scientific Communication, Leadership, Adaptability, Presentation Skills, Research Methodology

EDUCATION

PhD in Computer Science — University of Essex, United Kingdom — January, 2026 - Present

Research focus: Explainable AI methods for biomedical EEG signal analysis and neurological disorder classification.

MSc Applied Data Science — University of Essex, United Kingdom — October, 2022 - October, 2023

PROFESSIONAL EXPERIENCE

University of Essex, UK | PhD Researcher | Oct 2024 – Present

- Developing interpretable deep learning models for biomedical time-series analysis and brain signal classification.
- Designing deep learning approaches for biomedical time-series data analysis.
- Conducting research, experimental evaluation, and scientific communication.
- Collaborating with academic teams and presenting research findings.

Quanticore Labs Ltd (UK Software Startup), United Kingdom | Co-Founder & Software Engineer | Sep 2025 – Jan 2026

- Led backend architecture and software development initiatives.
- Built enterprise applications using Java, Spring Boot, and Hibernate.
- Supported technical planning, innovation, and product research activities.

AA Solutions Limited, Bangladesh | Lead Software Engineer | Jan 2018 – Jun 2022

- Managed engineering teams delivering enterprise software solutions.
- Improved backend application performance and database efficiency through software optimisation and maintainable system design.
- Performed code reviews and promoted software engineering best practices.

Data Vision, Bangladesh | Software Engineer | Apr 2013 – Dec 2017

- Developed scalable web applications and backend services.
- Collaborated with cross-functional teams to develop and maintain enterprise-scale business applications.

Anlima Textile Limited (Textile Company), Bangladesh | Assistant Programmer | Feb 2011 – Apr 2013

- Maintained ERP software modules and supported database operations.
- Developed desktop application features using C#.NET technologies.

SELECTED PROJECTS

Explainable AI for EEG Signal Analysis – Designed interpretable deep learning models for EEG classification and healthcare applications using Python and PyTorch.

Crop Disease Detection – Developed machine learning and image analysis models for early crop disease identification during MSc research.

EEG preprocessing pipeline

Deep learning classification framework

Explainable AI dashboard

Biomedical signal visualisation

Time-series modelling project

Research Interests & Publications

- Explainable AI for biomedical signal analysis
- EEG-based neurological disorder classification
- Deep learning for healthcare applications
- Preparing journal and conference submissions

VOLUNTEERING

University of Essex Volunteer Team (VTeam) Community Learning Project Lead (2023) – Supported inclusive learning and community education.

LANGUAGES

English (Professional Working Proficiency) | Bengali (Native)