Md Ashraful Islam

APPLIED SCIENCE / AI EVALUATION / SCIENTIFIC SOFTWARE

Brisbane, Australia | projects@maiphysics.com
maiphysics.com/portfolio | LinkedIn profile

Applied-science graduate and founder of MAI Physics, developing interactive scientific software with AI-assisted implementation. My work connects explicit assumptions, reference solutions and inspectable results. I am seeking early-career opportunities in scientific software, AI evaluation or research support, with an emphasis on reliable checks and clear technical communication.

Technical foundations

- Python and MATLAB foundations in scientific computing and numerical methods.
- Scientific problem framing, analytical reference comparisons and validation planning.
- AI-assisted prototyping, requirements clarification and review of model assumptions and outputs.
- Technical documentation, research communication and industry-university coordination.

Selected work at MAI Physics

Founder and independent project lead | 2026-present

Develop a platform for interactive experiments, reproducible models and scientific storytelling. Define project questions, direct AI-assisted implementation, review numerical comparisons and explain the assumptions and limitations of each demonstration.

Heat Solver Lab | Numerical model

An interactive one-dimensional heat model compares a finite-difference solution with an analytical reference. Users can inspect stability conditions and maximum/L2 numerical errors.

maiphysics.com/#synthetic-lab

Synthetic Conveyor Sensing Bench | Synthetic data

A deterministic simulation makes known geometry, latency, prediction and disturbance errors visible. Ground truth is defined by the model, enabling direct comparison and counterexamples.

maiphysics.com/robotics-sensing

P versus NP Visual Lab | Educational software

A Boolean satisfiability demonstration separates candidate search from verification using step controls, operation counts and JSON export.

maiphysics.com/p-vs-np

CONTRIBUTION

Portfolio development is AI-assisted. My contribution includes problem definition, implementation direction, validation planning, output review and scientific explanation. The public examples are educational software prototypes.

Experience & education

Hansal Group of Companies | 2024 onward

Technology business development and project liaison

- Contribute technology proposals, project planning and research communication.
- Supported 2025 RMIT work-integrated-learning coordination and documentation for ground-truth data collection and smart-irrigation concepts.

MetaCog Build Pty Ltd | 2026

Technical project contribution

- Contributed requirements, workflow definition and project documentation for AI-enabled construction and project-management concepts.

7-Eleven | Current

Retail assistant / team member

- Customer-facing retail work alongside independent technical development, with practical communication and day-to-day operational responsibility.

Education

RMIT University | Bachelor of Science (Applied Sciences)

Completed March 2024

Foundation in physics, mathematics, nanotechnology, scientific programming and research methods.

Trinity College | Foundation Studies

2017

Selected academic work

Carbon phases in ureilite meteorites | Research proposal

Prepared a literature-led proposal for identifying carbon phases through an SEM/FIB/TEM workflow, with a focus on method selection and evidence interpretation.

Nanoparticle interactions with proteins | Coursework

Used molecular visualisation and docking-score comparisons to examine protein interactions, including potassium-channel examples.

Research direction

Investigate whether explicit assumptions, counterexamples and independently defined checks improve the reliability of AI-assisted scientific reasoning. This is a proposed research direction building on my current scientific-computing demonstrations.