Mend-Amar Badral

MendeBadra | Mend-Amar Badral | mendebadra.github.io
mendamar.badral@gmail.com | +36 70 7385 744 | Budapest, Hungary

Driven by a problem solving mindset and fueled by curiosity, I always aspire to develop scalable solutions for the real-world, impactful problems.

Education

Budapest University of Technology and Economics (BME) Sep, 2025 – June, 2027
M.Sc. in Computer Science Engineering Budapest, Hungary
Supervisor: Márton Vaitkus
Specialization: Data Science & Artificial Intelligence

National University of Mongolia (NUM) Sep, 2021 – June, 2025
B.Sc. in Applied Mathematics Ulaanbaatar, Mongolia
GPA: 3.2/4.0 **(rank 3/34)**
Supervisor: Galtbayar Artbazar
Thesis: *Evaluating land degradation using image processing methods*
Presentation

Experience

Center of Mathematics Application Research Lab Oct, 2023 – June, 2025
Undergraduate Lab Lead & Research Intern

- **Lab Lead:** Selected as Undergraduate Lab Lead amongst the 6-8 student team in the final year. Co-taught and discussed a machine learning topics in weekly seminar meetings.
- **Research:** Developed a custom, vendor specific **Python program** which takes camera and sensor parameters into account. This enabled us to reach a conclusion that the spatial clustering of weed can be captured using Moran's I coefficient performed on images.
- **Organization:** Implemented a unified, documented folder structure for the research data backup which enabled efficient data retrieval and writing procedure.

Projects

Deep Learning Foundations and Concepts Book Examples Reproduction

- Self-initiated project to reproduce key examples from C. Bishop and H. Bishop's *Deep Learning Foundations and Concepts* to gain theoretical and fundamental understanding of **polynomial regression** and **probability theory**.

aiSim Data Integration for 3D Gaussian Splatting

- Implemented a custom JSON parser to extract and sensor data obtained by aiSim, an autonomous driving simulator, into a nerfstudio format.

Skills

Programming: Python, Julia, C/C++, R, MATLAB
Tools: Docker, Linux, Bash, Git, LaTeX