

Mend-Amar Badral

mendamar345@gmail.com • (+976) 86515136 • mendebadra.github.io • github.com/mendeBadra/

EDUCATION

National University of Mongolia

Bachelor of Science

June 2025

Ulaanbaatar, Mongolia

- Applied Mathematics
- GPA 3.2/4.0
- Relevant Coursework: Probability Theory, Optimization, Machine Learning, Artificial Intelligence

WORK EXPERIENCE

Center for Mathematics Applications

Undergraduate Research Student

October 2023 - June 2025

Ulaanbaatar, Mongolia

- Thesis title: Evaluating land degradation using image processing methods
- Developed an image analysis and statistics calculation pipeline in Python (1000+ lines) for segmenting weeds from drone images
- Utilized PyTorch for testing open source models and datasets for weed detection problem
- Utilized GIS programs (ArcGIS and QGIS) and photogrammetry softwares for displaying overall orthomosaic from drone images.

PROJECTS

Sinusoidal function interpolation Bishop's Deep Learning book example

February 2025

- This example is adapted from (Bishop 2023) book and I have reproduced computational results.
- Published on my blog website using Julia's [Pluto](#) notebook environment.

Train cargo simulation

Seminar with Industry 2025

May-June 2025

- Simulated optimal train cargo loading sequences, demonstrating up to ₮450M (~\$130K) annual cost savings by reordering cargo allocations in smart way.
- Built data pipeline using Python and pandas, enabling fast iteration on cargo ordering logic.
- Collaborated on GitHub with 10+ code contributions across a multi-author project.

UNIVERSITY LEADERSHIP

Hackum Club Member

Responsibilities

- Participate and help in organizing various programming training events

SKILLS & INTERESTS

- **Programming:** Python, Julia, Bash, Linux
- **Languages:** English (C1 proficiency IELTS 8.0), Mongolian (native)
- **Interests:** Deep Learning, Computer Vision, Travelling, Futsal