# TERA Program: Project Proposals for Final Year Undergraduate Students in Medical AI

The Technion-Rambam Initiative in Medical AI (TERA) invites Technion PIs and Rambam health professionals to submit project proposals for final-year undergraduate students specializing in medical data science. This initiative aims to bridge the gap between academia and clinical practice by providing students with the opportunity to work on real-world medical data challenges under the guidance of data scientists and experienced health professionals. This program aims to bring relevant projects and provide support to those selected projects while these be run in the regular setting of their home faculties. **As a pilot the program will be run for the faculties of Biomedical Engineering and Electrical and Computer Engineering and the Faculty of Data and Decision Sciences (DDS).** For the DDS faculty the program is run through the yearlong research project, course numbers 094701/094702.

## Project Overview

We are seeking project proposals that leverage advanced data science techniques to address critical issues in healthcare. Areas of interest include, but are not limited to:

- Analysis of medical imaging data (e.g., MRI scans, CT images)
- Development of predictive models for disease diagnosis and prognosis
- Integration of multi-modal data for comprehensive patient analysis
- Study of healthcare trends and outcomes using large datasets
- Exploration of genetic and environmental factors in disease development

## Eligibility

- **A co-PI from the Technion** to co-supervise the research on the data science aspects and a **co-PI researcher from Rambam**, to co-supervise the research from the clinical and ethical aspects.
- Commitment to have the dataset available by December 2024 and to obtain the appropriate ethics approval for sharing the data so the research can take place over a full academic year.
- Commitment in co-supervising the research students working on the project.

## Project Duration

- This is a one-year-long project. Students are expected to work on it an average of one day per week. Technion students are expected to spend at least two days per month on Rambam campus within

the TERA space made at their disposal and in order to ease meeting and working with Rambam health professionals.

# Benefits

- **Data access:** Rambam will prioritize and provide support for IRB approval, data anonymization and making the data available in compliance with hospital policies.
- **Working space at Rambam.** Physical space will be available on the Rambam hospital campus for students to work and meet with their medical co-supervisor.
- **Students' prizes:** student will be invited to present their work at the end of the year at the TERA yearly research event. Prizes will be provided for the best works. The first prize will be 5,000 NIS as a personal prize for research that resulted in a publication first authored by the students. Additional prizes worth 1,000 NIS will be given to sponsor the students presenting the output of their research at a relevant national or international conference.

# Searching for Existing Projects and Partners

PIs and clinicians with a project idea who are seeking a partner from the other institute are encouraged to use the link below to submit or browse submitted projects and connect with potential collaborators:

SUBMIT A PROJECT IDEA [HERE](#).          CONSULT PROJECT IDEAS [HERE](#).

# Application Process

To submit a project proposal, co-PIs should provide a 1-page proposal with:

1. A project description outlining the objectives, methodology, and expected outcomes. Include there the data type, availability status, IRB status.
2. Contact information of the Technion and Rambam co-supervisors.

**Deadline:** 30th September 2024. **For enquiries:** Dr. Joachim A. Behar (jbehar@technion.ac.il) and Dr. Ronit Almog ([r_almog@rambam.health.gov.il](mailto:r_almog@rambam.health.gov.il)). **Submit your application to:** Irena Papier (tera@technion.ac.il)