OFFICE OF
GLOBAL ENGAGEMENT

VIRTUAL GLOBAL
RESEARCH INTERNSHIP
IN ENGINEERING SCIENCE
HUMANITIES AND
MANAGEMENT

Build your career
from anywhere

e-GRIESHMA

Indian Institute of Technology Madras,
the forerunner in technical education in India,
welcomes international aspirants
to apply for an internship with

**RBCDSAI - One of India's premier
interdisciplinary labs**

About **IIT Madras**

IITM offers exciting opportunities for research and education in a wide variety of fields. With a sprawling campus of 620 acres, faculty of international repute, world class labs and India's 1st university-based research park, IITM is the ideal place for realizing your research goals.

About **RBCDSAI**

RBCDSAI, the leading interdisciplinary Data Science and AI research Centre in India, welcomes international aspirants, to apply for a virtual internship position and work with our versatile research group through the e-GRIESHMA Program (virtual Global Research Internship in Engineering Science Humanities and Management) offered by IIT Madras.

Led by the top AI researchers in India, RBCDSAI researchers have published numerous research articles in highly ranked conferences like NeurIPS, AAAI, AAMAS, EMNLP, etc. Our research group is driven by 34 faculty members from across 10 departments of IIT-Madras.

RBCDSAI, in collaboration with many industrial and government organizations, carries out fundamental research in the areas of deep learning, network analytics, learning with limited and partial data, causal modelling, data science specific system architecture and reinforcement learning. We have one of the country's largest groups in network analytics and deep reinforcement learning. We also have one of the most active natural language processing and deep learning groups.

Projects open for internship:

1. Structural Characterization of Algebraic Tournaments
2. The interconnection of adaptive modules/motifs
3. Network mapping
4. Automated Doubt Generation Models for Natural Language Contexts
5. AI based Acoustic Camera based Gesture Recognition.
6. Simulation assisted AI based Automation of X-Ray Baggage Scanning
7. AI based Simulations in Wave Propagation
8. Identification of putative driver genes and their role based on patient profile
9. Artificial intelligence for energy management and optimization in smart buildings
10. Knowledge augmented real-estate description generation
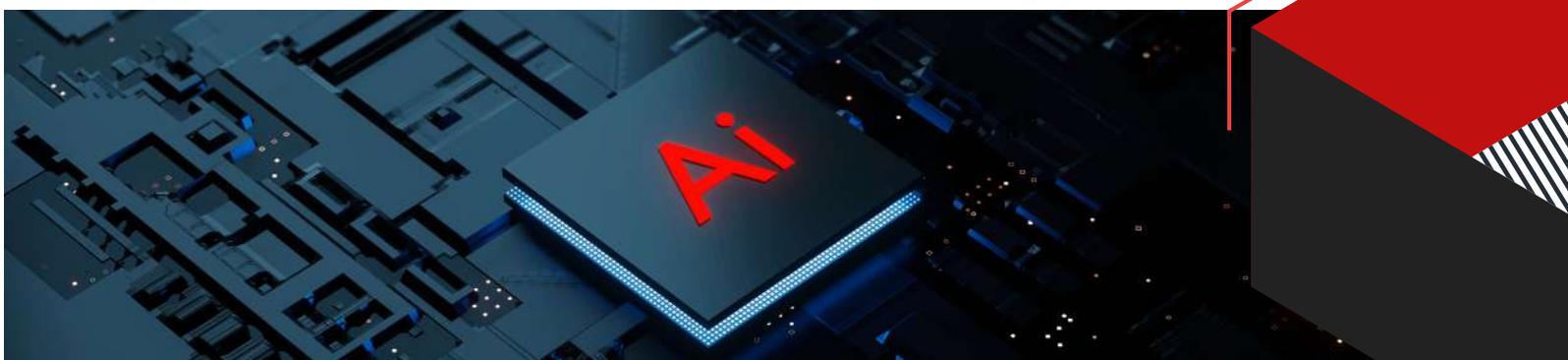11. Dropout prediction in MOOCs

Program:

- Duration: Project specific (3-6 months)
- Mode: Online
- Offered to final year UG & PG students
- Eligibility criteria: GPA: Min. 3/4 or 8/10
- Programs begin in May or June, 2021

Required documents:

- Statement of Purpose
  - Why you would like to do an internship at RBCDSAI?
  - What is your preparation for the area?
  - What are the projects you would like to work in?
    (You can choose upto 3 projects)
  - Why did you pick those specific projects?
- Curriculum Vitae
- Nomination letter from the International Office
- Transcripts
- Photograph

Selection process:

- A Python programming test will be held for all applicants
- For projects 4-11 , an additional round of screening
  will be conducted
    - Part A: MCQs on ML/DS/AI
    - Part B: 2 datasets with some tasks to be
      performed on them
- Upon clearing the initial rounds, a final interview
  might be scheduled with the project team

Testimonials:

I was an intern at RBCDSAI (previously RISEL-IIL) during my 2nd-year summer break. I found it a very instructive introduction to cutting-edge AI research. I got to work with some of the top minds of the country solving relevant and challenging machine learning problems. I enjoyed the opportunity to learn from students from a variety of disciplines and hash out complex ideas. The state-of-the-art computing facilities meant I had the freedom to explore a variety of approaches. I enjoyed my experience so much, I continued working with my mentor in the winter and off-campus throughout my undergraduate studies. I strongly feel that an internship at RBCDSAI is an excellent first step to conducting independent AI research.

Karthik Venkat Raman, Post-Baccalaureate Fellow, RBCDSAI
(Karthik will be pursuing MS CS at University of Illinois Urbana-Champaign)

Over the course of my internship at RBCDSAI under the guidance of Prof. Balaraman Ravindran, I was given opportunities to explore my interests, do meaningful research and interact with like-minded individuals, with a strong focus on the fundamentals.

Aravind Venugopal, Post-Baccalaureate Fellow, RBCDSAI

At RBCDSAI, each intern has the unique opportunity to explore a research project of his interest, under a supervisor, with access to high performance CPU/GPU resources. RBCDSAI strives to be one of the best AI centers in the world, and I was happy and honored to be a part of their research group. As an intern, I was a part of the weekly group discussions which exposed me to various areas of research done by other academics in IITM and expanded my knowledge on advanced topics. RBCDSAI hosts frequent colloquia where notable AI researchers will interact with students and talk about their research. Additionally, I was given space to participate in various extra-curricular activities and events conducted by RBCDSAI which made me appreciate the organization's culture which emphasizes work-life balance. With approachable faculty and amicable colleagues, my time as an intern in RBCDSAI has been an enlightening and exciting one.

Senthamizhan, Data Scientist, RBCDSAI

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