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## **Request for Abstract Proposals to present at the Fall 2022 Research Ideation Forum on Machine Learning / Artificial Intelligence**

### **Deadline for abstract proposals: October 17, 2022**

The Office for the Vice Provost (OVPR) invites faculty to participate in its next **Research Ideation Forum on November 21, 2022, from 11AM-5PM**. This event will feature presentation and discussion sessions on new, interdisciplinary team projects related to **Machine Learning / Artificial Intelligence**. Accepted presenters will have an opportunity to submit for seed funding.

### **What are Research Ideation Forums?**

Research Ideation Forums provide a medium for building new research teams that can address interdisciplinary questions. These Forums help teams nurture new project ideas for extramural funding submissions that will sustain their future growth and drive innovative research.

Research Ideation Forums provide faculty teams:

- A venue for gathering peer feedback to improve new research projects.
- Teams briefly present their project idea to an interdisciplinary group of colleagues who join them in a facilitated feedback session as *Breakout Rooms*.
- Funding strategy consultations to identify a range of public, private, and corporate extramural funding options for the project as it develops.
- Resources to support research teams during the project's planning and proposal development process, such as:
  - Opportunities for Team Seed Grants through the Chancellor-Provost Office.
  - Proposal review sessions with external proposal development consultants organized by the Office of the Vice Provost for Research.

### **How can I participate?**

We seek interdisciplinary research teams who aim to develop large-scale team projects in the following areas:

### **Machine Learning / Artificial Intelligence**

Projects might address, but are not limited to, these and related questions:

- Can machine learning and artificial intelligence help to explain human learning?
- Is it possible to teach machines empathy, morals, or compassion?
- How can we ensure that data used in machine learning or to train AI are balanced and prevent discrimination, bias, and/or marginalization?
- How does/will AI influence political and societal issues?
- How can we best assess the social impact of ML/AI?
- How can ML/AI be used to push the boundaries of discovery and innovation?
- Can machine learning algorithms from one data/field be applied to a novel area? How to avoid brittleness in machine learning algorithms?
- How can ML/AI be used in the fight against disinformation?
- How can we mitigate the impact of potential jobs lost to automated machines?
- Can AI be creative?
- How do we make machine learning systems production ready? (i.e., getting beyond a model-centric bias in machine learning to understanding machine learning systems).
- How do we make machine learning more accessible and affordable?

- How do we reduce the carbon footprint/environmental impact of ML/AI?
- How do we get to improve AI interpretability, to a right to an explanation, and to a right for better decisions?
- What are the problems with general benchmarks and de-contextualized data for ML/AI? Could advances in establishing contextualized benchmarks and implementing parallel approaches to evaluation overcome those problems?
- In what ways are methods and methodology from qualitative and quantitative social science informing ML/AI/Data Science, and vice-versa?

### **What are the guidelines?**

- Open to full-time faculty at Rutgers-New Brunswick. Partnerships with faculty from other Rutgers campuses are welcome (though the team leader should be from RU-NB).
- Research teams must include at least two faculty representing different disciplines.
- Participation of faculty from multiple departments is strongly encouraged.
- Early career faculty are particularly encouraged to apply.
- Ideas for research projects should aim to expand breadth of Rutgers research capacities and teams should not have secured external funding for this project.

**If selected, teams must commit to presenting their ideas at the Research Ideation Forum on ML/AI, November 21, 2022, from 11AM-5PM at Richard Weeks Hall of Engineering, Piscataway, NJ**

### **How do I apply?**

Interested research teams must submit the following abstract information on InfoReady. All applicants will be notified of decisions by October 31, 2022.

- Name, title, and departmental affiliation for the (a) idea leader and (b) additional faculty team members.
- How does your proposed research relate to ML/AI? (3 sentence max)
- Describe the team's idea for the proposed research project. (500 words max)
  - What need do you aim to address? And why is this problem significant?
  - How do you plan to address this problem?
  - How is your approach innovative?
  - Why is an interdisciplinary team needed to address this problem?

### **What can I expect if my team is selected to participate?**

- Each team will be expected to:
  - Plan to give a brief presentation on the proposed topic, followed by a panel.
  - Attend the entire forum and work to build new connections with other attendees.
- The OVPR will work with each team to:
  - Identify and invite forum attendees relevant to your proposal.
  - Provide post-forum opportunities to apply for seed internal funding in support of the project's continued development.

Please contact Dr. Sheila Borges Rajguru, [sheila.rajpguru@rutgers.edu](mailto:sheila.rajpguru@rutgers.edu), with questions.