To: College of Public Health Injury Prevention Research Center (IPRC) Faculty, Research Staff and Partners

The College of Public Health Injury Prevention Center is seeking proposals for research projects that require Artificial Intelligence/Machine Learning (AI/ML) expertise and dedicated AI/ML computational resources. The funds will not be provided directly to the investigator. Instead, they will be provided to the Iowa Initiative for Artificial intelligence (IIAI, www.iiai.uiowa.edu) to directly support the selected research projects.

The potential use of AI/ML in the IPRC research area includes data driven investigations. This IPRC call for proposals is designed to facilitate development of new and/or enhance existing interdisciplinary collaborations that can benefit from novel aspects enabled by incorporating AI and machine learning.

Responsive proposals will:
- address important questions in IPRC research using data-driven approaches
- be based on access to sufficient data to answer (or start answering) such questions
- seek machine learning expertise as an enabling strategy
- describe the predictors or input variables (X) and the response or outcome variables (Y)
  - for example: "We aim to use data about traffic density, type of the road/intersection, signage, and age of the drivers (X) to predict traffic scenarios likely leading to traffic accidents (Y)."
  - or "We aim to use experience of the workers, data about number of hours worked during the current day, current week, etc., their level of fatigue, level of training/experience, type of the job, ... (X) to predict the likelihood and/or type of work-related injuries (Y)."
  - or “We will use data from traumatic brain injury registry database together with relevant data from Epic (X) to predict a risk of developing sepsis and its severity (Y)."
- be willing to invest effort in building a new interdisciplinary team

Awards will amount to the equivalent of $11,500 in support from the IIAI. This corresponds to about 10 weeks of expert support at 25% effort and the requisite computational resources to achieve results adequate as preliminary data in a grant proposal. It will also include an expert write-up of the needed methodology for a research proposal. The IIAI will consult with awardees to plan for longer-term collaborations that will ensure the sustainability of the project. It is anticipated that up to 2 awards will be made during this round.

Applicants are required to review concepts with M. Sonka (milan-sonka@uiowa.edu), Director of IIAI, who will make the recommendation for a full submission. An internal peer-review committee will be identified to review proposals and make recommendations concerning funding to the IPRC leadership.

Please submit a 1-2 page Letter of Interest addressing the following:

1. Project Title
2. Investigators
3. Specific aims + Statement of IPRC Relevance; should include a brief, conceptual description of the predictor or input variables (X) and the response or outcome variables (Y)
4. Current support for the project (if any)
5. Preliminary data (if any), description of available data to facilitate the proposed research
6. Specifics on how involvement of the IIAI expertise/use of computational resources will advance the research
7. Plans to receive extramural funding

Timeline:
- 2/14/2020
  - Email a brief statement of intent to M. Sonka (m Milan-sonka@uiowa.edu) and Corinne Peek-Asa (corinne-peek-asa@uiowa.edu)
  - This email should include a draft document briefly outlining items 1, 3, 5 of the Letter of Interest above
- 2/24 – 3/20/2020
  - Scheduled meetings of each team with IIAI to discuss the proposed research
- 5/1/2020 Proposal submission
- 5/4 – 5/15/2020 Internal review of proposals, recommendation to IPRC leadership
- 5/22/2020 Selection of projects to be funded by IPRC
- 5/29/2020 Announcement of up to 2 projects to be funded
- 7/1/2020 Funding starts