**CS 895: Advanced Seminar in Neuro-symbolic AI**
**Fall 2023: CRN 55767, T-Th: 1:00-2:30 ET**
**Course will be held at the AI Institute, not SWE!**

**Link for Zoom**https://us06web.zoom.us/j/86860836529?pwd=MmVIR3JKQUtHTGptTzNkbDcvV1FkZz09 **Call if you are not in Columbia**
**Make sure you are a member of this LinkedIn group and GChat Space for this course**
**Student Dashboard**

This is an advanced seminar suitable for Ph.D. students planning to pursue their dissertation in select aspects of Artificial Intelligence (AI).

**Theme:** The course will investigate, in a discussion format, neuro-symbolic AI or hybrid AI, and broadly cognitive science and neuroscience-inspired AI. The material will encompass past research on semantic, cognitive, and perceptual computing, symbolic and statistical AI, knowledge-infused learning, and interdisciplinary topics where AI is inspired by cognitive science, neuroscience, and behavioral economics. The students will also be engaged in an individual or team research project resulting in a manuscript suitable for a conference submission. Students may be able to use AI Institute's 5 petaflops GPU cluster or much larger HiPerGator AI.

**Format:** You must be prepared to learn to be an independent researcher, motivated and capable of reading publications and online materials, have very good coding expertise relevant to implementing AI algorithms and technologies or using AI to solve challenging problems, and be able to run code on high-end computational resources. Discussions will be led by instructors as well as students. Part of the course will use a flipped classroom style and will usually require preparations in advance of each class. Students will also carry out a project and must be able to work well on a team project. The student must be able to attend the class in person (online instruction may be offered at the instructor's description but is not guaranteed). Students may wish to check out the previous comparable seminar.

**Grading:** 50%: class participation, engagement, preparation, presentation. 50%: project (periodic review and final results) resulting in a manuscript (research paper).

**Prerequisite**: The instructor's permission is required to understand course objectives and plans before registering. The course will involve intense engagement and effort, hence unsuitable for students taking significant additional coursework.

**Instructors:** Prof. Amit Sheth
Co-instructors: Profs. Amitava Das and Valerie Shalin.

**Location:** AI Institute Lobby meeting space (5th Floor, Science & Technology Building)

**Students taking the course**

| Name | Sc.edu email |
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| Muska Garg (virtually) | muskanphd@gmail.com |
| Savannah Seals (joining virtually) | s.m.seals@outlook.com |

Setting up an account on Hipergator with 140 DGX with 8 GPU each (over 1000 GPUs) (only for those with sc.edu email):
https://help.rc.ufl.edu/doc/Federated_Account_Request
https://help.rc.ufl.edu/doc/UFRC_Help_and_Documentation

Recording of:
Class 1 [5 Jan 2023]: Dr. Sheth
Class 2 [10 Jan 2023]: Dr. Sheth
Class 3 [12 Jan 2023]: Dr. Sheth
Class 4 [17 Jan 2023]: Dr. Das
Class 5 [19 Jan 2023]: Dr. Das
Class 6 [24 Jan 2023]: Dr. Das
Class 7 [26 Jan 2023]
Class 8 [31 Jan 2023]
Class 9 [2 Feb 2023]
Class 10 [7 Feb 2023]
Class 11 [9 Feb 2023]: Dr. Shalin
Class 12 [14 Feb 2023] Dr. Shalin
Class 13 [16 Feb 2023] Dr. Shalin

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We now have a playlist that has all our class recordings