

EAAI-20 Program

Saturday, February 8, 2020

8:55 - 9:05: Welcome

Nate Derbinsky and Lisa Torrey

9:05 - 9:55: #AIForAll: A 64-year Perspective on AI, Computing, Inclusion, and Diversity

Marie desJardins

As the AI community prepares to celebrate the 2nd anniversary of the Dartmouth Summer Research Project on Artificial Intelligence that launched AI as a field, it is an appropriate time to look back over the last 64 years to consider how far we have progressed. This presentation will focus particularly on trends in education, diversity, and inclusion in AI and in computing more generally. The talk will also include recommendations for the field, including an increased emphasis on ethical computing, best practices for inclusive classroom and work environments, and how to be an effective ally for underrepresented groups.

9:55 - 10:30: Blue Sky Ideas

Chair: Nate Derbinsky

- (5 min) Ryan Blake Jackson
- (5 min) Jiacheng Liu
- (5 min) Rajiv Ratn Shah
- (5 min) Adam Smith
- (5 min) Paul Taele
- (5 min) Qian Yang
- (5 min) Lisa Zhang

10:30 - 10:50: Coffee Break

10:50 - 11:30: Main Track

Chair: Lisa Torrey

- (20 min) Teaching Undergraduate Artificial Intelligence Classes: An Experiment with an Attendance Requirement
Sven Koenig, Tansel Uras, Liron Cohen

- (20 min) Teaching Constraint Programming Using Fable-Based Learning via Massive Open Online Courses: An Experience Report
Mavis Chan, Cecilia Chun, Holly Fung, Jimmy Lee, Peter Stuckey

11:30 - 12:30: AI for Education Track

Chair: Nate Derbinsky

- (20 min) Geospatial Clustering for Balanced and Proximal Schools
Subhodip Biswas, Fanglan Chen, Andreea Sistrunk, Sathappan Muthiah, Zhiqian Chen, Nathan Self, Chang-Tien Lu, Naren Ramakrishnan
- (20 min) Multiple Data Augmentation Strategies for Improving Performance on Automatic Short Answer Scoring
Jiaqi Lun, Jia Zhu, Yong Tang, Min Yang
- (20 min) Using AI techniques in a Serious Game for Socio-moral Reasoning Development
Ange Adrienne Nyamen Tato, Roger Nkambou, Aude Dufresne

12:30 - 2:00: Lunch Break

2:00 - 3:00: Main Track

Chair: Lisa Torrey

- (20 min) An Experimental Ethics Approach to Robot Ethics Education
Tom Williams, Qin Zhu, Daniel Grollman
- (20 min) Making High-Performance Robots Safe and Easy to Use for an Introduction to Computing
Joseph Spitzer, Joydeep Biswas, Arjun Guha
- (20 min) Teaching Game AI as an Undergraduate Course in Computational Media
Adam M. Smith, Daniel Shapiro

3:00 - 3:30: Model AI Assignments

Chair: Todd Neller

- (15 min) Exploring Unfairness and Bias in Data
Jonathan Chen, Tom Larsen, Marion Neumann

- (15 min) A Module for Introducing Ethics in AI: Detecting Bias in Language Models
Ameet Soni, Krista Thomason

3:30 - 3:50: Coffee Break

3:50 - 4:35: Model AI Assignments

Chair: Todd Neller

- (15 min) Predicting and Preventing Deaths in the ICU: Designing and Analyzing an AI System
Stephen Keeley, Michael Guerzhoy
- (15 min) Gesture Recognition using Convolutional Neural Networks
Lisa Zhang, Bibin Sebastian
- (15 min) Wasserstein GAN - Depth First Learning
Cinjon Resnick, Avital Oliver, Surya Bhupatiraju, Kumar Agrawal, James Allingham

Sunday, February 9, 2020

9:30 - 9:40: Welcome

Nate Derbinsky and Lisa Torrey

9:40 - 10:30: On Contemporaneous Computing Education: ML for K-12

Ben Shapiro and Abigail Zimmerman-Niefield

Computer science is a field of remarkable breadth, with problems in human-computer interaction alone spanning natural language processing, visual, audible, and tangible interfaces, accessible design, social computing, art-making. Machine learning is now being applied in every one of these domains. Bruner claimed that “any subject can be taught effectively in some intellectually honest form to any child at any stage of development.” Computing education must take up this call, including offering developmentally-appropriate machine learning education. I will present a vision for how this could unfold, share progress on my team’s efforts to develop machine learning education for youth, and discuss ongoing challenges.

10:30 - 10:45 Poster Previews

Chair: Lisa Torrey

- (5 min) Using Cloud Tools for Literate Programming to Redesign an AI course for Non-traditional College Students
Maria Hwang, Calvin Williamson
- (5 min) Coding in the Liberal Arts through Natural Language Processing and Machine Learning
Ursula Wolz, Jennifer Wilson
- (5 min) Minecraft as a Platform for Project-Based Learning in AI
Sameer Singh

10:45 - 11:00: Coffee Break

11:00 - 11:40: AI for Education Track

Chair: Nate Derbinsky

- (20 min) Semi-supervised Learning to Perceive Children's Affective States in a Tablet Tutor
Mansi Agarwal, Jack Mostow
- (20 min) AISpace2: An Interactive Visualization Tool for Learning and Teaching Artificial Intelligence
Chenliang Zhou, Dominic Kuang, Jingru Liu, Hanbo Yang, Zijia Zhang, Alan Mackworth, David Poole

11:40 - 12:10: Model AI Assignments

Chair: Todd Neller

- (15 min) Playing Against Adversary and Stochastic Agents in Connect Four Game
Narges Norouzi, Ryan Hausen
- (15 min) Graphical Networked Checkers Bots Assignment
Matthew Evett

12:10 - 1:45: Lunch Break

1:45 - 2:25: Main Track

Chair: Lisa Torrey

- (20 min) Zhorai: Designing a Conversational Agent for Children to Explore ML Concepts
Phoebe Lin, Jessica Van Brummelen, Galit Lukin, Randi Williams, Cynthia Braezeal
- (20 min) Lessons Learned from Teaching Machine Learning and Natural Language Processing to High School Students
Narges Norouzi, Snigdha Chaturvedi, Matthew Rutledge

2:25 - 3:15: K-12 AI Education in 2020

Panel: David Touretzky, Christina Gardner-McCune, Cynthia Braezeal, Emily Reid

3:15 - 3:30: Coffee Break

3:30 - 4:00: Model AI Assignments

Chair: Todd Neller

- (15 min) A Project on Multi-Agent Path Finding (MAPF)
Wolfgang Hoenig, Jiaoyang Li, Sven Koenig
- (15 min) PyPlat: A Flexible Platform Game Project
Sejong Yoon

4:00 - 4:15: Research Challenge Announcement

Todd Neller

4:15 - 4:45: Community meeting

All attendees are invited to join us for a community meeting at the end of EAAI-20. This will be an opportunity to ask questions and make suggestions for EAAI-21 and beyond. Bring your thoughts and ideas for the future of EAAI!