Lindsay Popowski
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Education

Harvey Mudd College, Claremont, CA May 2021
Computer Science/Math Major
3.99 GPA

- Current coursework: Natural Language Processing, Algorithms
- Relevant previous coursework: Computability and Logic, Data Structures, Operations Research, Discrete Mathematics, Probability and Statistics, Abstract Algebra, Artificial Intelligence, Constraint Programming

Research Experience

Student Researcher, Human-Computer Interaction (2020)
Carnegie Mellon Institute for Software Research, with Professor Brad Myers and Toby Li

- Self-taught neural networks and NLP content
- Used NLP methods to perform unsupervised training to produce embeddings for app screen GUI components and entire app screens
- Coded four embedding models from scratch
- Developed testing frameworks for each of them and performed the evaluations
- Wrote sections of a paper for conference submission

Under Review:

- Screen2Vec: Semantic Embedding of GUI Screens and GUI Components (CHI 2021)

Student Researcher, Human and Computer Agent Interaction (2019)
Harvey Mudd College, with Professor James Boerkoel

- Developed two new algorithms to dynamically schedule multi-agent teams (with a partner)
- Implemented and tested one of the algorithms and a baseline
- Wrote sections of a paper for conference submission explaining my work and presented it

Publications:

- Dynamic Control of Probabilistic Simple Temporal Networks, *AAAI 2020 Proceedings* (with co-authors Michael Gao and James C. Boerkoel)
- Akmal, Shyan, et al. "Quantifying Controllability in Temporal Networks with Uncertainty." *Artificial Intelligence* (2020): 103384.

Student Researcher, Interdisciplinary Computer Science (2018)
Harvey Mudd College, with Professor Zach Dodds

In this research, I contributed to three different projects:

- Worked with the physics department on developing their lab course, creating customizable data analysis scripts in Google Colab with practice sections (used the next semester for close to 200 students)
- Incorporated commercial natural language processing tools into the research of a government professor (created pipelines for her to scrape news article data and perform sentiment analysis and entity recognition tasks)
- Improved the intro CS course by researching other intro courses, reporting on the aspects that seemed fruitful, and writing example homeworks to incorporate the language R.

Under Review:

- Biology-based CS1: Results and reflections, ten years in (SIGCSE TS 2021)

Work/Tutoring Experience

Computer Science Grader/Tutor Spring 2019-Present

- Tutored students in an intermediate CS class weekly
- Graded homeworks, assisting in developing a rubric and offering feedback
- Helped review and redesign assignments

Physics Grader/Tutor Fall 2018, 2019

- Graded for 35 students per week and gave pertinent feedback
- Tutored for a class of 35 students weekly

Projects

Clinic: Model Explanation and Visualization

(In progress- senior capstone project)

Worked on a team of four students to:

- Manage project timeline with corporate liaisons
- Explore and evaluate current state-of-the-art black box model explanation systems
- Implement and adjust explaining systems to our use cases

Achievements

- Dean's List
- CRA Outstanding Undergraduate Research Nominee
- Platt Prize Nominee – one of 15 nominees from the class of 2021 selected for academic achievement