Gregory Kondas

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Research Interests

My primary research interests lie at the intersection of machine learning and healthcare. My goal is to address real world problems with machine learning. I am broadly interested in representation learning, particularly in applying self-supervision techniques to Electronic Health Records and wearable physiological sensor data.

Education

University of Michigan, B.S. in **Computer Science** with a Minor in **Physics** Sept 2019 – May 2024

- GPA: 3.94/4.0, *with distinction* & Phi Beta Kappa.
- **Coursework:** Machine Learning, Computer Vision, Natural Language Processing, Linear Algebra, Statistics, Foundations of Computer Science, Structural Biology, Modern Physics, Organic/Physical/Biological Chemistry

Research Experience

Full-Time Research Assistant, Michigan AI lab – Ann Arbor, MI May 2024 – Present

- Currently developing novel self-supervision techniques for electronic health records and continuous glucose monitoring data with Professor Jenna Wiens's MLD3 group.

Undergraduate Research Assistant, Michigan AI lab – Ann Arbor, MI May 2023 – May 2024

- Worked with Professor Jenna Wiens and PhD candidate Sarah Jabbour to develop a novel dataset-level vision model explanation method that leverages text-to-image diffusion models.
- Second authorship on "DEPICT" manuscript accepted to *ECCV 2024*.

Undergraduate Research Assistant, ATLAS Collaboration Project – Ann Arbor, MI Jun 2021 – Aug 2021

- Diagnosed and resolved mechanical issues encountered during construction and testing of sMDTs (small Monitor Drift Tubes) for CERN's upgrade of the Muon Spectrometer at the Large Hadron Collider in Geneva, Switzerland.

Undergraduate Research Assistant, Comp. and Cognitive Neuroscience Lab – Ann Arbor, MI Sep 2020 – May 2022

- Designed and implemented various quality control and data cleaning scripts to analyze heterogeneous fMRI data with Professor Thad Polk.

Publications

- Sarah Jabbour, **Gregory Kondas**, Ella A. Kazerooni, Michael W. Sjoding, David Fouhey*, Jenna Wiens*. "DEPICT: Diffusion Enabled Permutation Importance for Image Classification Tasks." *ECCV. 2024.* *Co-senior authors of equal contribution.

Teaching Experience

Teaching Assistant, Physics II for the Life Sciences – Ann Arbor, MI Aug 2021 – Dec 2023

- Facilitated two weekly problem-solving workshop sessions for approximately 40 students to prepare for exams.
- Hosted twice-weekly office hours to answer student questions.

Poster Presentations

- Gregory Kondas. "DEPICT: Diffusion Enabled Permutation Importance for Image Classification Tasks." *Michigan AI Symposium*. October 2024.

Technical Skills

Languages: Python, C++, Java

Frameworks: PyTorch, Pandas, NumPy