

Marek Gardias

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I work on foundation modeling, enabling delightful user experiences. My background is in multimodal language models, representation learning, and graph models. To ship ML products I work cross functionally using large scale data and compute.

Work

Apple

Senior Machine Learning Engineer

System and models for [Apple Intelligence](#) and [Photos Memory Creation](#)

Cupertino, CA

Jan. 2022 - Present

Worcester Polytechnic Institute

Teacher's Assistant, CS541 Deep Learning

Graduate Student Researcher

Worcester, MA

Aug. 2020 - May 2021

May 2020 - Aug. 2020

Proofpoint

Software Engineer Intern

San Francisco, CA

Jun. 2019 - Aug. 2019

Cloudflare

Software Engineer Intern, Sales Operations

San Francisco, CA

Jun. 2018 - Aug. 2018

Education

Worcester Polytechnic Institute

M.Sc. Computer Science

B.Sc. Computer Science, Cum Laude

Worcester, MA

May 2020 - May 2021

Aug. 2016 - May 2020

Projects

Modeling social interactions to inform classroom climate

- Geometric modeling with student-instructor attention for inferring positive climate in a classroom
- System utilizing model to provide teachers feedback on intervals of classroom video

Residual GANs for context-based image outpainting

- Generative modeling with residual connections and joint local and global discriminators for image outpainting
- Published: [arXiv:2005.06723](#) [[eess.IV](#)]

Inferring corrosive behavior of platings with computer vision

- Software for data collection and inference, tested at Cape Canaveral Air Force Station with U.S. ARL scientists
- CNN and SVM ensemble for corrosion test sample rating per ASTM D1654

Controlling swarms in AR with gesture and speech

- Magic Leap system for a user to deploy a swarm of robots to move real objects by manipulating their virtual representations using a combination of voice and gesture controls

Skills

Software: Python (PyTorch, Numpy, etc), Linux, Bash, Git, and Jupyter Notebook amongst others

Compute: Provisioned cloud instances (i.e. AWS, GCP) for replicatable and scaling distributed compute