

Daniel Zeng

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Stanford University

M.S. Computer Science

GPA 3.91

June 2023

University of California, Berkeley

B.A. Computer Science

GPA 3.96

May 2021

Relevant Courses

CS224W - ML with Graphs, CS182 - Neural Networks
CS330 - Deep Multi-Task and Meta-Learning (TA)
CS285 - Deep Reinforcement Learning, CS188 - AI
EE126 - Probability/Random Processes, CS189 - ML
CS224N - NLP, CS162 - Operating Systems

Skills

Languages: Python, Java, Golang, Bash, Javascript, C/C++, Matlab
Platforms/Tools: PyTorch, TensorFlow, NumPy, Git, AWS, Kubernetes, Terraform, SQL, matplotlib, Jupyter Notebooks

Publications

Daniel Zeng, Tailin Wu, Jure Leskovec. *ViRel: Unsupervised Visual Relations Discovery with Graph-level Analogy*. ICML 2022 Beyond Bayes (Reasoning) Workshop. <https://arxiv.org/abs/2207.00590>.

Experience

Google | Research Intern, Health AI

June 2022 - Sept 2022

- Researched knowledge distillation of DermAssist vision models to improve model efficiency
- Distilled a ResNet101x3 teacher (207 M params) to a ResNet50x1 student (25 M params)
- Distilled student achieves 54% accuracy, a small 4% gap from teacher, while being 8.3x smaller
- Distillation outperforms by 10% accuracy on ResNet50x1 baseline of training directly on labels

SNAP Group | Graduate Researcher, Stanford University

Sept 2021 - Present

Machine learning research, with postdoc Tailin Wu and advised by Professor Jure Leskovec

- Researched neural-symbolic visual concept reasoning for few-shot learning on the ARC dataset
- Implemented unsupervised discovery of concept relations with graph neural networks
- Improved vision and learning pipeline for compositional object-relation correspondence

Yu Lab | Undergraduate Researcher, ICSI, UC Berkeley

Sept 2020 - Aug 2021

Machine learning computer vision research, with Tsung-Wei Ke and advised by Dr. Stella Yu

- Researched unsupervised image representation learning using pixel-level contrastive learning
- Implemented and benchmarked featurizations on semantic segmentation image embeddings
- Investigated spatial and structural relationships on classification and retrieval performance

Stripe | Software Engineer Intern, Data Platform Infrastructure

May 2020 - Aug 2020

- Implemented, designed Hadoop command proxy service with Go, gRPC on AWS, Kubernetes
- Deployed scalable service to production which proxied thousands commands by Aug 2020
- Built observability dashboard for service via SignalFX and alerting, detectors via Terraform

AutoLab | Undergrad Researcher, Berkeley Artificial Intelligence Research

Feb 2019 - Feb 2020

Machine learning research, with postdoc Dr. Ajay Tanwani and advised by Professor Ken Goldberg

- Researched semi-supervised domain adaptation using adversarial representation learning
- Implemented and benchmarked adaptation algorithms, network architectures, metric learning
- Optimized adaption by aligning marginal and conditional distributions in latent feature space

Microsoft | Software Engineer Intern, Azure Production Infrastructure

May 2019 - Aug 2019

- Designed, developed analytics tool to automate queries for optimizing customer experience
- Built productivity tooling to empower visualization and observability in Azure infra systems

NASA | Software Engineer/Research Intern, Ames Research Center

June 2018 - Aug 2018

- Developed simulation for cyber security attacks on Air Traffic Management (ATM) system
- Built and tested functionality to generate and visualize diverse attack scenarios
- Created internal tooling to configure and interface ATM framework components with simulator

Dal Bó Lab | Undergrad Researcher, UC Berkeley Haas School of Business

Sept 2017 - May 2018

Data analysis research, advised by Mehmet Seflek and Professor Ernesto Dal Bó

- Developed methods for natural language processing and statistical analysis to extract relevant text content from archaeological journals
- Built pipeline for collecting archaeological journals using Crossref REST API and web scraping

Upsilon Pi Epsilon, Nu Chapter | Vice President, UC Berkeley

Dec 2018 - Dec 2019

- Oversaw the candidacy process for 100+ prospective members and guided committee goals
- Led professional development committee of 20+ people to improve recruiting skills
- Organized workshops including resume, interview, and negotiation for broader CS community