JACOB STERN

+1-330-422-8444 ⋄ jastern33@gmail.com

EDUCATION

Brigham Young University 2020-2022
M.S. Computer Science

Brigham Young University 2016-2020
B.S. Applied and Computational Mathematics

GPA: 4.0

CAREER OBJECTIVE

To drive scientific discoveries through deep learning research.

WORK EXPERIENCE

Nvidia 2020
Deep Learning Architecture Intern

Worked on a tool to analyze the performance of CUDA kernels and Nvidia hardware for deep learning workloads. Enabled future performance gains on the MLPerf benchmark by enabling support for MXNet implementations of Single-Shot Detection and Resnet.

CaptionCall 2018
Speech Recognition/Machine Learning Intern

Benchmarked ASR providers by programming clients for speech recognition APIs. Wrote clients to stream audio data in real time for via asynchronous programming in C#.

RESEARCH PROJECTS

Deep Learning for Medical Imaging 2019

Implemented several visual attention mechanisms for medical image segmentation. Engineered 75x speed-up for model training (minutes vs. days) by devising a custom data-loading method for a large dataset. Reduced start-up/spin-down time by writing bash scripts to automate research workflow, including ssh, docker container set-up, and Tensorboard logging.

Delay-Partial Differential Equations 2017-2018

Developed a numerical solver for DPDEs (delay partial differential equations) in Matlab.

TEACHING

Deep Learning - CS 474 2019
Head Teaching Assistant

Head teaching assistant for a class of 150 students. Taught weekly deep learning tutorials. Wrote a lab on transfer learning. Spent 10 hours/week helping students code neural networks in Pytorch.

PROJECTS AND EXTRACURRICULARS

Poster – Bias-Variance Decomposition of MSE for Regularized OLS 2019

Derived theorem for uniqueness of solutions to the regularized OLS problem. Derived the bias-variance decomposition of MSE for regularized least squares estimator. Presented poster on results of research.

Literature Review – Flow-based Generative Models 2019

Wrote a 12-page literature review paper on flow-based generative models, an emerging field of deep learning research.

AIChE ChemE Car Club 2016-2017

Electrical Engineering Specialist

Designed and programmed electronics for chemical-powered car using Arduino.

NON-TECHNICAL EXPERIENCE

The Church of Jesus Christ of Latter-day Saints 2018-2020

Executive Secretary

Volunteered 5 hours/week managing interview and meeting schedule for church leaders, including temple recommend interviews, personal interviews, financial interviews, tithing settlement interviews, ecclesiastical endorsements, bishopric meetings, ward council meetings, and more. Kept the bishopric running like a well-oiled machine.

Aspiro Adventure 2017

Wilderness Therapy Field Guide

Worked as a field guide. Led groups of 6-12 students on 9-week wilderness excursions, teaching them wilderness survival skills. Drank lots of disgusting water and survived (we bleached it first). Helped young people overcome personal challenges through wilderness survival.

The Church of Jesus Christ of Latter-day Saints 2014-2016

Full-time Spanish-speaking Missionary in San Fernando, CA

Was blessed to spend my full days in study, teaching, and service. Served in leadership capacities as a district leader, zone leader, trainer, and assistant to the mission president. Engaged in missionary exchanges 3x/week to build relationships and help missionaries develop teaching skills.