Daniel Gordon

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https://danielgordon10.github.io/

Education

The University of Washington 2014 – 2020
Ph. D. in Computer Science
Advised by Dieter Fox and Ali Farhadi

The University of Washington 2016
Masters in Computer Science

Washington University in St. Louis 2010 – 2014
Bachelor of Science in Computer Science
Second Major in Entrepreneurship
Summa Cum Laude – GPA: 3.96, Engineering Class Rank: 8/323
Undergraduate Research Advised by Robert Pless

Work Experience

Apple Maps 3DV: Apr 2024 – Present
Senior Machine Learning Engineer
- Responsible for semantic segmentation and detection models being run on imagery at world scale
- Developed end-to-end models for predicting 3D vectorized maps from raw pixels

Third Wave Automation:
Team Lead: Perception and Pallet Manipulation Jun 2023 – Mar 2024
- Oversee a team of 5 engineers serving as both a manager and a contributor for several major projects
- Facilitated cross-team collaboration resulting in doubling the success rate of autonomous workflows

Tech Lead: Perception Jan 2022 – Dec 2022
- Led a team of 3 engineers working on major features for the core competencies of the product
- Contributed technical design expertise throughout the code stack
- Pioneered Python type checking throughout the codebase

Independent Contributor: Perception Jun 2020 – Dec 2021
- Designed and implemented many visual algorithms for the core product including object detection and tracking, pose estimation, local mapping and collision checking, and several safety systems

Facebook AI Research (FAIR): Winter 2019

Research Intern – A-STAR Team with Dhruv Batra

- Conducted research resulting in the ICCV publication "SplitNet: Sim2Sim and Task2Task Transfer for Embodied Visual Navigation"

Allen Institute for Artificial Intelligence: Winter 2017

Research Intern – PRIOR Team with Roozbeh Mottaghi

- Conducted research resulting in the ICCV publication "Visual Semantic Planning using Deep Successor Representations"

Google:

Software Engineering Intern – Google Maps Summer 2013, Summer 2014

- Designed and programmed the Street View Time Machine frontend
- Increased polish and feature improvement on the new Maps frontend

Engineering Practicum Intern – Google Wallet Summer 2012

- Integrated an autocomplete feature to the Wallet website
- Added Google+ profile images and names to various Wallet pages
- Created the Wallet dashboard page and recent transaction widget

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Publications

Learning by Watching and Learning by Doing 2020
Ph.D. Thesis

Watching the World Go By: Representation Learning from Unlabeled Videos Arxiv 2020
Daniel Gordon, Kiana Ehsani, Dieter Fox, Ali Farhadi

What Can You Learn from Your Muscles? Learning Visual Representations from Human Interactions Arxiv 2020
Kiana Ehsani, Daniel Gordon, Thomas Nguyen, Roozbeh Mottaghi, Ali Farhadi

ALFRED: A Benchmark for Interpreting Grounded Instructions for Everyday Tasks CVPR 2020
Mohit Shridhar, Jesse Thomason, Daniel Gordon, Yonatan Bisk, Winson Han, Roozbeh Mottaghi, Luke Zettlemoyer, Dieter Fox

SplitNet: Sim2Sim and Task2Task Transfer for Embodied Visual Navigation ICCV 2019
Daniel Gordon, Abhishek Kadian, Devi Parikh, Judy Hoffman, Dhruv Batra

What Should I Do Now? Marrying Reinforcement Learning and Symbolic Planning Arxiv 2018
Daniel Gordon, Dieter Fox, Ali Farhadi

Shifting the Baseline: Single Modality Performance on Visual Navigation & QA NAACL 2019 Short
Jesse Thomason, Daniel Gordon, Yonatan Bisk

IQA: Visual Question Answering in Interactive Environments CVPR 2018
Daniel Gordon, Aniruddha Kembhavi, Mohammad Rastegari, Joseph Redmon,

Dieter Fox, Ali Farhadi
Received the Nvidia Pioneering Research Award at CVPR 2018

AI2-THOR: An Interactive 3D Environment for Visual AI — Technical Report 2017
Eric Kolve, Roozbeh Mottaghi, Daniel Gordon, Winson Han, Eli VanderBilt, Luca Weihs, Alvaro Herrasti, Matt Deitke, Kiana Ehsani, Yuke Zhu, Abhinav Gupta, Ali Farhadi

Re3: Real-Time Recurrent Regression Networks for Object Tracking — RA-L 2018
Daniel Gordon, Ali Farhadi, Dieter Fox

Visual Semantic Planning using Deep Successor Representations — ICCV 2017
Daniel Gordon, Yuke Zhu, Eric Kolve, Dieter Fox, Li Fei-Fei, Abhinav Gupta, Roozbeh Mottaghi, Ali Farhadi

Collaborative Rephotography — SIGGRAPH 2013 Studio Talks
Ruth West, Abby Halley, Daniel Gordon, Jarlath O'Neil-Dunne, Robert Pless

Collaborative Imaging of Urban Forest Dynamics: Augmenting Rephotography to Visualize Changes over Time — IS&T/SPIE 2013
Ruth West, Abby Halley, Jarlath O Neil-Dunne, Daniel Gordon, Robert Pless

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Service

Co-organizer of 1st Workshop on Visual Understanding Across Modalities and THOR competition — CVPR 2017
http://vuchallenge.org/

Organizer of Deep Learning in Practice Seminar Talk Series — Summer 2017
https://sites.google.com/cs.washington.edu/deeplearninginpractice/

Teaching Experience

Teaching Assistant at the University of Washington

Introduction to Deep Learning: Head TA — Fall 2018, Fall 2019
- Wrote Numpy-based Pytorch-like library for deep learning assignments and autograder for grading
- Managed 5 other TAs and 160 students

Teaching Assistant at Washington University in St. Louis

Introduction to Artificial Intelligence — Spring 2013, Spring 2014
Algorithms and Data Structures — Fall 2013
Logic and Discrete Mathematics — Fall 2012
Introduction to Computer Science — Fall 2010-Spring 2012

Honors and Awards

NVIDIA Graduate Fellowship (1 of 10 awardees from 230+ applicants) 2019

National Science Foundation GRFP Honorable Mention (Top 1/3rd of applicants) 2015 and 2016

Wissner-Slivka Fellowship (University of Washington CSE) 2014

Achievement Rewards for College Scientists Fellowship (UW CSE 1 of 2 awardees) 2014-2016

Outstanding Senior Award – Computer Science (Washington University) 2014

Sigma Xi (Washington University) Inducted Spring 2014

Upsilon Pi Epsilon (Washington University Top 1/3rd of CSE Class) Inducted Fall 2013

Tau Beta Pi (Washington University Top 1/8th of Engineering Class) Inducted Fall 2012

Patents

Providing a thumbnail image that follows a main image April 3, 2018
US Patent 9,934,222

Display screen with graphical user interface or portion thereof March 14, 2017
US Patent D780,795

Technical Skills

Proficient in	Python, Java, PyTorch, C++, C, TensorFlow, Caffe, Git, HTML, CSS
Capable in	Bazel, Matlab, Javascript, Google Closure, Android, PHP, Mercurial, C#, LaTeX
Basic Knowledge	CUDA, Objective-C/Cocoa, iPhone, MySQL, JQuery, Unix Terminal

Open Source Repositories

VINCE: https://github.com/danielgordon10/vince
YouTube8M Data: https://github.com/danielgordon10/youtube8m-data
Deep Learning Class Numpy Library: https://gitlab.com/danielgordon10/dl-class-2019a
SplitNet: https://github.com/facebookresearch/splitnet
AI-Habitat: https://github.com/facebookresearch/habitat-api
AI2-THOR: https://github.com/allenai/ai2thor
Re3: https://github.com/danielgordon10/re3-tensorflow
Re3-Pytorch: https://github.com/danielgordon10/re3-pytorch
IQA: https://github.com/danielgordon10/thor-iqa-cvpr-2018