Josh Myers-Dean

Website
Github
Google Scholar

josh.myers-dean@colorado.edu
Boulder, CO

Education

University of Colorado, Boulder — Boulder, CO
Computer Science, Ph.D. - GPA: 4.0/4.0 — *Fall 2021 - Present*
Advisor: *Danna Gurari* Committee: *Alessandro Roncone, Tom Yeh*

Western Washington University — Bellingham, WA
Computer Science, BSc.; Mathematics Minor — *Awarded June 2021*
Advisors: *Scott Wehrwein, Filip Jagodzinski*

Research Experience

Allen Institute for AI — Seattle, WA
Research Scientist Intern, Mentor: Favyen Bastani — *May 2023 - August 2023*

Adobe Research — San Jose, CA
Research Scientist Intern, Mentors: Brian Price, Yifei Fan — *May 2022 - August 2022*

University of Colorado Boulder — Boulder, CO
Graduate Research Assistant, Mentor: Danna Gurari — *August 2021 - Present*

Pacific Northwest National Laboratory — Richland, WA
NLP Research Intern, Mentor: Karl Pazdernik — *August 2020 - September 2021*

Western Washington University — Bellingham, WA
Undergraduate Research Assistant, Mentors: Scott Wehrwein, Filip Jagodzinski — *April 2019 - June 2021*

Professional Experience

Pacific Northwest National Laboratory — Richland, WA
Technical Intern - VR/AR — *June 2020 - August 2020*

Western Washington University — Bellingham, WA
Web Applications Developer — *April 2019 - June 2020*

Teaching Experience

University of Colorado Boulder — Boulder, CO
Grader - Neural Networks & Deep Learning — *January 2022 - April 2022*

Western Washington University — Bellingham, WA
Teaching Assistant - Intro to Computer Vision, Computer Graphics — *September 2020 - March 2021*

Publications

† **Denotes equal contribution**

- **Josh Myers-Dean**, Yifei Fan, Brian Price, Wilson Chan, Danna Gurari. Interactive Segmentation for Diverse Gesture Types Without Context. *Under review at ICCV 2023.*
- Trevor Ortega, Thomas Nelson, Skyler Crane, **Josh Myers-Dean**, and Scott Wehrwein. Computer vision for international border legibility. In *Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*, pages 3838–3847, January 2023
- Haley A. Wofford†, **Josh Myers-Dean**†, Brandon A. Vogel, Kevin Alexander Estrada Alamo, Frederick A. Longshore-Neate, Filip Jagodzinski, and Jeanine F. Amacher. Domain analysis and motif matcher (damm): A program to predict selectivity determinants in monosiga brevicollis pdz domains using human pdz data. *Molecules*, 26(19), 2021. Project Page

- David H. Smith, Qiang Hao, Christopher D. Hundhausen, Filip Jagodzinski, **Josh Myers-Dean**, and Kira Jaeger. Towards modeling student engagement with interactive computing textbooks: An empirical study. In *Proceedings of the 52nd ACM Technical Symposium on Computer Science Education*, SIGCSE '21, page 914–920, New York, NY, USA, 2021. Association for Computing Machinery
- **Josh Myers-Dean** and Scott Wehrwein. Semantic pixel distances for image editing. In *The IEEE Conference on Computer Vision and Pattern Recognition (CVPR) Workshops*, June 2020. *Accepted for oral presentation* Project Page
- Sam Herr†, **Josh Myers-Dean**†, Hunter Read†, and Filip Jagodzinski. Petra: Drug engineering via rigidity analysis. *Molecules*, 25(6):1304, Mar 2020

Preprints

- **Josh Myers-Dean**, Yinan Zhao, Brian Price, Scott Cohen, and Danna Gurari. Generalized few-shot semantic segmentation: All you need is fine-tuning, 2021

Patents

- Generating Masked Regions of an Image Using a Predicted User Intent: Filed 12/22

Awards

- CU Boulder Computer Science: Outstanding Service - 2023
- CU Boulder Research Expo: Best Work In Progress (4 winners) - 2023
- Adobe Code Quality Jam: 2x Category winner, Overall honorable mention - 2022
- Graduate Research Fellowship Program (GRFP): NSF - 2021-2026
- Early Career Professional Development Fellowship: CU Boulder Computer Science - 2021
- James Lee Johnson Memorial Endowment: Western Washington University Computer Science - 2020
- 1^{st} Place - Biosurveillance Mobile App. Dev. Competition: Pacific Northwest National Laboratory - 2020
- Federal Pell Grant: 2015-2021

Presentations

- Guest Lecture (CU): May 2023, CSCI 5722 - Computer vision, invited by Dr. Tom Yeh
- Interactive Segmentation for Diverse Gesture Types Without Context: February 2023, BAIVC Student Symposium
- Giving Context: Entity Classification from a Single Name: August 2021, PNNL Virtual Research Symposium
- Robust Entity Tagging in the Wild: December 2020, PNNL Virtual Research Symposium
- Semantic Pixel Distances for Image Editing: June 2020, CVPR NTIRE. Video
- Bash: Fall 2019, Materials
- Machine Learning: Fall 2019, Winter 2020, Materials
- API: Winter 2020, Materials

Service

- Reviewer - CVPR 2023

Outreach

- **ITLP K-12**: Designing and administering educational materials to 15 students using micro:bits to serve middle and high school students in Boulder. Program Page
- **Teen Science Cafe**: Presented my path to becoming a graduate student and administered activities relating machine learning to web accessibility to high school students in Lafeyette, CO. Program Page
- **CU Boulder Ph.D. Application Mentoring** : Provided feedback on Ph.D. application materials from applicants to the computer science Ph.D. Program Page
- **WWU Computer Science Peer Tutor**: Provided assistance to undergraduate students in introductory programming classes such as data structures, automata theory, and computer systems. Program Page
- **Sunnyland Elementary School "Hour of Code"**: Assisted elementary school students in designing programs using the Scratch programming language. Program Page

Mentorship

- Stuti Pandey (MS Student): Image Captioning, January 2023 - Present

Technical Skills

- **Languages**: Golang, Python, Javascript, C#, MySQL, R, Shell, Julia, LaTeX
- **Technologies & Frameworks**: Docker, Git, PySpark, AWS S3, AWS EC2, PyTorch, Numpy, Unity

Relevant Courses

- Deep Learning, Computer Vision, Computer Graphics, Statistical Methods, Numerical Analysis, Data Driven Modeling, Deep Reinforcement Learning, Bayesian Probability