

# DEVIN LANGE

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## 🎓 EDUCATION

**University of Utah**, Salt Lake City, Utah Fall 2019 – Present

PhD candidate researching visualization systems advised by Dr. Alexander Lex

**University of Minnesota**, Minneapolis, Minnesota 2012 – 2016

B.S. in Computer Science, with minor in Mathematics, *summa cum laude*

## ★ AWARDS AND HONORS

<b>Honorable Mention for Best Paper Award</b> (top 20 paper out of 445 submissions), IEEE VIS	2021
<b>Honorable Mention for Best Abstract Award</b> , BioVis	2021
<b>Shane Robison Fellowship</b> , University of Utah	2019
<b>Presidential Scholarship</b> , University of Minnesota	2012

## 📄 PUBLICATIONS

1. **Devin Lange**, Shaurya Sahai, Jeff M. Phillips, Alexander Lex, *Ferret: Reviewing Tabular Datasets for Manipulation* Computer Graphics Forum (EuroVis), vol. 42, no. 3, pp. 187–198, 2023  
DOI: 10.1111/cgf.14822  
[🌐 ferret.sci.utah.edu](https://ferret.sci.utah.edu) · [📄 github.com/visdesignlab/Ferret](https://github.com/visdesignlab/Ferret)
2. Derya Akbaba, **Devin Lange**, Michael Correll, Alexander Lex, Miriah Meyer, *Troubling Collaboration: Matters of Care for Visualization Design Study* SIGCHI Conference on Human Factors in Computing Systems (CHI), no. 812, pp. 1–15, 2023  
DOI: 10.1145/3544548.3581168
3. **Devin Lange**, Eddie Polanco, Robert Judson-Torres, Thomas Zangle, Alexander Lex, *Loon: Using Exemplars to Visualize Large-Scale Microscopy Data*. IEEE Transactions on Visualization and Computer Graphics (VIS), vol. 28, no. 1, pp. 248–258, 2022  
DOI: 10.1109/TVCG.2021.3114766  
★ **Honorable Mention Award** · [🌐 loon.sci.utah.edu](https://loon.sci.utah.edu) · [📄 github.com/visdesignlab/Loon](https://github.com/visdesignlab/Loon)
4. **Devin Lange**, Francesca Samsel, Ioannis Karamouzas, Stephen J. Guy, Rodney Dockter, Timothy M. Kowalewski, Daniel F. Keefe, *Trajectory Mapper: Interactive Widgets and Artist-Designed Encodings for Visualizing Multivariate Trajectory Data*. In Proceedings of EuroVis Conference (Short Papers), pp. 103–107, 2017  
DOI: 10.2312/eurovisshort.20171141
5. Jose Guillermo Rangel Ramirez, **Devin Lange**, Panayiotis Charalambous, Claudia Esteves and Julien Pettré, *Optimization-based computation of locomotion trajectories for Crowd Patches*. In Proceedings of the Seventh International Conference on Motion in Games, pp. 7–16, 2014  
DOI: 10.1145/2668064.2668094

## 👛 PROFESSIONAL EXPERIENCE

**Research Assistant for Dr. Alexander Lex**, University of Utah 2020 – present

- Designed and developed cell microscopy visualization systems.
- Designed and developed visualization system for data forensics.

**Graduate Research Intern**, Ozette Technologies May 2023 – August 2023

- Developed prototype to visualize aggregate matrices of cell phenotype abundance.

**Software Developer**, Epic Systems Corporation, Wisconsin 2016 – 2019

- Lead Developer on a 10,000+ hour project to create a tool for reviewing medical result data.
- Organized brain trust to get input from physician leads across many organizations.
- Created and taught learnToCode advanced class after hours to coworkers.

**Research Assistant for Dr. Daniel Keefe**, University of Minnesota 2015 – 2016

- Developed an open-source application in C++ for viewing and analyzing multivariate trajectory data.
- Created framework to aid in the development of future linking and brushing applications.

**Research Assistant for Dr. Julian Pettré**, INRIA, France Summer of 2014

- Created and implemented an algorithm to compute locomotion trajectories for the Crowd Patches project.
- Created visualization for video, diagrams, and assisted with paper for publication

**Research Assistant for Dr. Stephen J. Guy**, University of Minnesota Summer of 2013

- Created pipeline to do offline rendering of crowd simulations using Python and Mitsuba.
- Developed a motion control system for quadcopters in Python.

## TEACHING

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**CS 2420 — Introduction to Data Structures and Algorithms**, University of Utah, Summer 2022  
Instructor. Undergraduate course on fundamentals of computer science.

**CS 3500 — Software Practice**, University of Utah, Fall 2021  
Guest Lecturer. Undergraduate course on fundamentals of software engineering.

**COMP 5360/MATH 4100 — Introduction to Data Science**, University of Utah, Spring 2021  
Teaching Assistant. Undergraduate course on data science.

**CS 5630/CS 6630 — Visualization**, University of Utah, Fall 2020  
Teaching Assistant. Graduate/undergraduate course on visualization.

**CSCI 1901H — Honors Intro to Computer Science**, University of Minnesota, Fall 2013  
Teaching Assistant. Undergraduate course on introductory computer science concepts.

## PRESENTATIONS

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**Is that right? Visualizations for scientific data quality control**

- Invited Talk, Datavisyn Scientific Talk Series, (virtual), November 16, 2023

**Ferret: Reviewing Tabular Datasets for Manipulation**

- Paper Talk, EuroVis 2023, Leipzig, Germany, June 14, 2023

**Loon: Using Exemplars to Visualize Large-Scale Microscopy Data**

- Invited Talk, Cancer Cell Plasticity Research Collaboration Group, Huntsman Cancer Institute, University of Utah, Salt Lake City, UT, November 15, 2023;
- Invited Talk, Dagstuhl Seminar, Schloss Dagstuhl, Germany, November 8, 2023;
- Invited Talk, Phase Holographic Imaging, Salt Lake City, UT, November 3, 2023;
- Invited Talk, Visualization and Image Data Management, Harvard VCG, Harvard Medical School, University of Dundee, Sage Bionetwork, OHSU, MGH and Brigham hospitals, and others, (virtual), January 13, 2023
- Paper Talk, IEEE VIS, Virtual, October 29, 2021
- Invited Talk, BioVis at ISCB, Virtual, July 27, 2021
- Invited Talk, Department of Biomedical Informatics, Harvard Medical School, Boston, MA, (virtual) May 12, 2021

**Trajectory Mapper: Interactive Widgets and Artist-Designed Encodings for Visualizing Multivariate Trajectory Data**

- Paper Talk, EuroVis 2017, Barcelona, Spain, June 2017

- Undergraduate Honors Thesis, Department of Computer Science, University of Minnesota, Minneapolis, MN, May, 2016

## </> TECHNICAL SKILLS

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**Full Stack Development:** TypeScript, JavaScript, Vue, D3, SASS, Vega-Lite, Python, C#, C++

**Design Software:** Adobe Photoshop, Adobe Illustrator, Adobe Premiere

## ★ SERVICE

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### Reviewing

IEEE Visualization 2023

IEEE TVCG 2021

### Student Positions

College of Engineering College Council Representative, University of Utah 2021 – 2024

Communication Coordinator of Graduate Student Advisory Committee, University of Utah 2021 – 2022

President of Graduate Student Advisory Committee, University of Utah 2020 – 2021