

Curran Kelleher



Education

- **Ph. D. in Computer Science**
University of Massachusetts, Lowell, MA (December 2014)
- **Master of Science in Computer Science**
University of Massachusetts, Lowell, MA (December 2012)
- **Bachelor of Science in Computer Science with Bioinformatics**
University of Massachusetts, Lowell, MA (December 2010)
Study Abroad year at Technische Universität Darmstadt, Germany, 2008

Skills

Data visualization design and development, Web technologies, project management, client services, software engineering, teaching. Tools: D3.js, React, TypeScript, NodeJS, AWS, Linux, LLMs, AI code generation tools.

Experience

Software Engineer

Exaforce, INC (September 2024 - September 2025)

- Developed custom data visualization components for the Exaforce SaaS product, an AI-powered enterprise Security Operations Center (SOC) platform
- Worked on various mini-projects to build out bespoke interactive visuals
- Contributed to the open source data visualization library [Unovis](#)
- Notable projects include: custom permissions matrix visualization, open source Treemap component, staged visualization of "mean time to investigate" metrics

Adjunct Teaching Professor

Worcester Polytechnic Institute (August 2018 - present)

- Developed and delivered a 15-week online graduate course in data visualization
- Taught the course Fall 2018, Fall 2019, Fall 2020, Fall 2021, Spring 2023, Spring 2024, Fall 2024, Fall 2025
- Ongoing development of a data visualization textbook
- Developed and iterated vizhub.com as a platform for use by students in the course

Founder

Datavis Tech, INC (February 2016 - October 2024)

- Custom data visualization client services focused on engineering with Web technologies
- Worked as an independent contractor for various clients including Stamen and Graphicacy
- Launched vizhub.com, a SaaS product for data visualization development, in 2018
- Developed a number of open source works found at vizhub.com/curran

Capabilities and Insights Analytics Expert

McKinsey & Company (January 2022 - January 2023)

- Worked with Jason Forrest to build and grow the Data Visualization Lab core team
- Collaboratively designed and developed interactive data visualizations for clients
- Worked on a variety of public-facing bespoke interactives for McKinsey.com
- Managed and mentored engineers and designers new to data visualization

Lead Design Technologist

Stamen Design (August 2020 - October 2021)

- Visualization design and engineering lead across a variety of client projects
- Some degree of project management including delegation of work to contractors
- Feedback-driven iteration of visual products for clients using Scrum and Kanban methodologies
- Primary technologies used: D3, React, Mapbox, Figma, AWS

Software Engineer

Alpine Data Labs, San Francisco, CA (February 2015 - February 2016)

- Designed and developed a Data Visualization platform for Alpine's Big Data Analytics product
- Integrated D3.js-based visualizations with Hadoop and Spark based data management software
- Helped organize and run Meetups, gave meetup talks & educational lectures

Teaching Assistant

University of Massachusetts Lowell, MA (January 2012 - December 2014)

- Graded student assignments, held office hours, occasionally lectured
- GUI Programming I and II (Fall 2013, Spring 2014)
- Computer Graphics I and II (Fall 2012, Spring 2013)
- Introduction to Algorithms (Spring 2013)
- Foundations of Computer Science (Spring 2012)

Intern

Rapid7, Cambridge, MA (June - August 2013)

- Designed and developed an interactive visualization dashboard with multiple linked views for a new Rapid7 cybersecurity data analysis product (D3, Leaflet.js).

Teacher

Teacher Massachusetts Institute of Technology (MIT), Cambridge, MA

- (July - August 2013) Designed and taught a seven-session course on interactive graphics, part of the [HSSP](#) program, covering basic JavaScript and using HTML5 Canvas.
- (July - August 2012) Designed and taught a 52-hour course for high school students on [HTML5 graphics](#), part of the [Junction](#) program, covering interaction, fractals, and complex systems.

Research Assistant

Institute for Visualization and Perception Research (IVPR)

University of Massachusetts Lowell, Lowell, MA (June 2005 - January 2012)

- Developed algorithms for automated pedigree layout (family history trees)
- Co-project manager of the Weave project, oversaw server side development
- Contributed to book "Interactive Data Visualization" by Ward, Grinstein and Keim
- Authored JyVis, an interactive visualization platform (Java, Python, Groovy)
- Authored utilities for named entity aggregation and full text search (Java, Lucene)
- Worked with a team to develop a visual document management system in C#
- Session history recording and replay in the Universal Visualization Platform

Guest Researcher

Data Analysis and Visualization Group

University of Konstanz, Germany (June - August 2010, June - August 2011)

- Designed a technology for dissemination and integration of data cubes
- Worked on interactive data cube visualizations

Research Assistant

Computer Graphics Center (ZGDV), Darmstadt, Germany (October 2007 - August 2008)

- Built software for overlaying hairstyles on face pictures (Java)
- Motion tracking, visual hull reconstruction and pose estimation with CUDA

Teacher

Massachusetts Institute of Technology (MIT), Cambridge, MA (July - August 2007)

- Co-taught an 8-week course with Justin Curry, entitled "Gödel, Escher, Bach: A Mental Space Odyssey". Lecture videos [available on YouTube](#).
- Developed and taught example Python programs for generating fractals.

Research Assistant

New England Complex Systems Institute (NECSI), Cambridge, MA (January - June 2006)

- Developed a simulation platform for earth-wide socioeconomic dynamics (Java)

Research Assistant

University of Massachusetts Medical School, Worcester, MA (June 2004 - June 2005)

- Assisted researchers with biological experiments investigating the role of RNAi components in drosophila (fruit fly) embryonic axis specification

Publications

- Curran Kelleher, Haim Levkowitz. "Reactive Data Visualizations". Visualization and Data Analysis Conference, San Francisco, CA. February 2015
- Curran Kelleher. "Visualizing the Universal Data Cube". Doctoral Dissertation, University of Massachusetts, Lowell, MA. December 2014
- Haim Levkowitz, Curran Kelleher. "Cloud and mobile Web-based graphics and visualization". IGI Global "Encyclopedia of Information Science and Technology". 2013
- Haim Levkowitz, Curran Kelleher. "Cloud and mobile Web-based graphics and visualization". Tutorial at SIBGRAPI, Ouro Preto, Brazil. 2012
- Brian Drohan, Curran Kelleher, Georges Grinstein, Kevin Hughes. "Assessing Risks for Families with Inherited Cancers". Visual Analytics in Healthcare, IEEE VisWeek. October 2011
- Curran Kelleher, Georges Grinstein. "Fractal Perspective Visualization Technique for Semantic Graphs". 15th International Conference on Information Visualisation. London, UK. July 2011
- Curran Kelleher, Georges Grinstein. "JyVis - A Flexible High Level Visual Analytics Framework". University of Massachusetts Technical Report. 2007
- Howard Goodell, Chih-Hung Chiang, Curran Kelleher, Alex Baumann, Georges Grinstein. "Collecting and Harnessing Rich Session Histories" Tenth International Conference on Information Visualisation. London, UK. 2006
- Howard Goodell, Chih-Hung Chiang, Curran Kelleher, Alex Baumann, Georges Grinstein. "Metrics for analyzing rich session histories". BELIV. Venice, Italy. 2006