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, Teaching, Interactive Graphics, User Interfaces, JavaScript, Frontend, HTML5, D3.js, React, Node.js, AWS, Linux.

EXPERIENCE

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.

Adjunct Teaching Professor
Worcester Polytechnic Institute (August 2018 - present)

- Developed and delivered curriculum for graduate level data visualization course.
- Ran the online data visualization course every Fall for 4 years.
- Developed and iterated VizHub.com as a platform for use in teaching the course.

Founder & CEO
Datavis Tech, INC (February 2016 - present)

- Founded the company Datavis Tech, INC (https://datavis.tech)
- Provided consulting services including data visualization development, design of interactive visualizations, training, and targeted Open Source development to a variety of clients.
- Created https://vizhub.com/ in 2018, continue to maintain and develop the product.
- Delivered a public lecture series: Get it Right in Black & White
- Developed a number of open source works found at https://vizhub.com/curran

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 in place of Professor.
    - 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)

Data Visualization Intern
Rapid7, Cambridge, MA (June - August 2013)

- Designed and developed an interactive visualization dashboard with multiple linked views for UserInsight, 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.

Software Engineer and 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 the book "Interactive Data Visualization" by Ward, Grinstein and Keim
- Authored JyVis, an open source interactive visualization platform (Java, Python, Groovy)
- Authored utilities for named entity aggregation and full text search (Java, Lucene)
- Worked with a team of four to develop a visual document management system in C#
- Implemented 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 and prototyped a technology for dissemination and integration of data cubes
- Worked on interactive data cube visualizations

Software Engineer and Research Assistant
Computer Graphics Center (ZGDV), Darmstadt, Germany (October 2007 - August 2008)

- Designed and implemented software for overlaying hairstyles on face pictures (Java)
- Real-time 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 MIT OpenCourseWare.

Software Engineer and Research Assistant
New England Complex Systems Institute (NECSI), Cambridge, MA (January - June 2006)

- Developed a visualization and 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 and related phenomena

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

AWARDS

- 2013 P.M. Raj Scholarship for Excellence in Computer Science
- 2011 Open Source Software World Challenge Certificate of Achievement
- 2011 UMass Lowell Computer Science Department Outstanding Graduate Student Award
- 2009 UMass Lowell Computer Science Merit Scholarship for Excellence in Computer Science