

Arvind Satyanarayan

arvindsatya@cs.stanford.edu
http://arvindsatya.com/
@arvindsatya

EDUCATION

Ph.D. Computer Science

Stanford University, June 2017 (expected)

Advisor: Jeffrey Heer

M.S. Computer Science

Stanford University, 2014

B.S. Computer Science

University of California, San Diego, 2011

Advisor: James D. Hollan

PUBLICATIONS

Vega-Lite: A Grammar of Interactive Graphics. Arvind Satyanarayan, Dominik Moritz, Kanit Wongsuphasawat, Jeffrey Heer. *IEEE Trans. Visualization & Computer Graphics (Proc. InfoVis)*. October 2016. [22% Acceptance Rate, **Best Paper Award (Top 1)**].

Visual Debugging Techniques for Reactive Data Visualization. Jane Hoffswell, Arvind Satyanarayan, Jeffrey Heer. *Computer Graphics Forum (Proc. EuroVis)*. June 2016. [27% Acceptance Rate]

Reactive Vega: A Streaming Dataflow Architecture for Declarative Interactive Visualization. Arvind Satyanarayan, Ryan Russell, Jane Hoffswell, Jeffrey Heer. *IEEE Trans. Visualization & Computer Graphics (Proc. InfoVis)*. October 2015. [22% Acceptance Rate]

Declarative Interaction Design for Data Visualization. Arvind Satyanarayan, Kanit Wongsuphasawat, Jeffrey Heer. *Proc. ACM User Interface Software and Technology (UIST)*. October 2014. [22% Acceptance Rate]

Lyra: An Interactive Visualization Design Environment. Arvind Satyanarayan, Jeffrey Heer. *Computer Graphics Forum (Proc. EuroVis)*. June 2014. [25% Acceptance Rate]

Authoring Narrative Visualizations with Ellipsis. Arvind Satyanarayan, Jeffrey Heer. *Computer Graphics Forum (Proc. EuroVis)*. June 2014. [25% Acceptance Rate]

Webzeitgeist: Design Mining the Web. Ranjitha Kumar, Arvind Satyanarayan, Cesar Torres, Maxine Lim, Salman Ahmad, Scott R. Klemmer, Jerry O. Talton. *Proc. ACM Human Factors in Computing Systems (CHI)*. May 2013. [20% Acceptance Rate, **Best Paper Award (Top 1%)**].

Using Overlays to Support Collaborative Interaction with Display Walls. Arvind Satyanarayan, Nadir Weibel, James D. Hollan. *Proc. ACM Intelligent User Interfaces (IUI)*. February 2012. [19% Acceptance Rate]

POSTERS & TECHNICAL REPORTS

The CHI 2013 Interactive Schedule. Arvind Satyanarayan, Daniel Strazzulla, Clemens Klokmoose, Michel Beaudouin-Lafon, Wendy Mackay. *Extended Abstracts, ACM Human Factors in Computing Systems (CHI)*. May 2013.

Learning Structural Semantics for the Web. Maxine Lim, Ranjitha Kumar, Arvind Satyanarayan, Cesar Torres, Jerry O. Talton, Scott R. Klemmer. *Stanford CSTR 2012-03*. December 2012.

A Platform for Large-Scale Machine Learning on Web Design. Arvind Satyanarayan, Maxine Lim, Scott R. Klemmer. *Extended Abstracts, ACM Human Factors in Computing Systems (CHI)*. May 2012.

PROFESSIONAL EXPERIENCE

May 2014 – Sept 2016 **Co-Founder and Advisor**, *Apropose, Inc.*

Sept 2013 – May 2014 **Co-Founder and Chief Architect**, *Apropose, Inc.*

- Led initial development of core infrastructure and prototype applications, culminating in a successful **\$1.9M seed round** backed by NEA and Andreessen Horowitz.

- Summer 2012 & Spring 2016 **Research Intern, *In Situ Lab, INRIA and LRI, Université Paris-Sud***
With Profs. Wendy Mackay and Michel Beaudouin-Lafon
- Designed an interactive schedule for the CHI 2013 conference, which coupled large displays and mobile devices to allow attendees to collaboratively filter and visualize upcoming events.
 - Developed a prototype visualization substrate to enable collaborative interactive visual analysis between multiple users using heterogeneous devices and a large display wall.
- 2011 – Present **Graduate Research Assistant, *Interactive Data Lab, Stanford Univ./Univ. of Washington***
With Prof. Jeffrey Heer
- 2011 – 2012 **Graduate Research Assistant, *HCI Group, Stanford University***
With Prof. Scott Klemmer
- 2010 – 2011 **Undergraduate Research Assistant, *DCog-HCI Lab, UC San Diego***
With Prof. James Hollan
- Developed the **Overlay**: an interface element to facilitate multi-user, multi-device interactions on wall-sized displays.
 - Developed **HIPerFace**: a Java framework to combine interactions from multiple individual input device into novel composite interactions.
- Summer 2008 **Movable Type Product Intern, *Six Apart Ltd.***
San Francisco, CA
- Developed an extensible revision history framework for Movable Type objects with a slider and `diff`-type interfaces.
 - Built a Perl-based system to allow community members to maintain profiles and submit plugins to be showcased for download.
- 2004 – 2007 **Publisher and Developer, *Movalog and Movalog Plugins***
<http://www.movalog.com>
- Developed several popular plugins for Movable Type. One plugin, CustomFields, was **acquired** by Six Apart and is now bundled with Movable Type.
 - Co-organized The Style Contest, a design contest for Movable Type blog themes. Six Apart, Adobe and StyleMaster sponsored over \$17,000 in prizes, and judges included Derek Powazek, Jason Santa Maria and John Allsopp.
 - Author of an influential weblog in the Movable Type community featuring numerous tips, tutorials and articles.

INVITED TALKS & DEMOS

- October 2016 **The Vega Ecosystem**
Keynote Address, Visualization In Practice Workshop, *IEEE VIS, Baltimore, MD*
- July 2016 **Reactive Building Blocks: Interactive Visualizations with Vega**
Keynote Address, DataViz Camp, *United Nations*
- April 2016 **Reactive Building Blocks: Interactive Visualizations with Vega**
OpenVis Conf, *Boston, MA*
- May 2016 **Higher-Level Tools for Interactive Data Visualization**
INRIA Saclay, *Saclay, France*
- September 2015 **Higher-Level Tools for Interactive Data Visualization**
BiD Seminar, *UC Berkeley, Berkeley, CA*
- April 2015 **Lowering the Threshold of Visualization Design**
Science Colloquium, *Linfield College, McMinnville, OR*
- December 2014 **Lowering the Threshold of Visualization Design**
Tata Innovation Labs, *Tata Consultancy Services, Delhi, India*

Designing Visualizations with Lyra Tutorial

- April 2015 I247: Information Visualization & Presentation, *UC Berkeley Information School, Berkeley, CA*
 December 2014 Tata Innovation Labs, *Tata Consultancy Services, Delhi, India*
 December 2014 J221: Introduction to Data Visualization, *UC Berkeley Journalism School, Berkeley, CA*
 November 2014 HCDE 511: Information Visualization, *University of Washington, Seattle, WA*

Lyra: An Interactive Visualization Design Environment

- April 2014 OpenVis Conf, *Boston, MA*
 March 2014 CAR, *Baltimore, MD*
 February 2014 Tapestry, *Annapolis, MD*

NewsCamp :: Introduction to D3

- March 2014 CAR, *Baltimore, MD*

TEACHING

- Winter 2016 **HCID 520: User Interface Software & Technology**, *University of Washington*
 Co-Instructor with Prof. Jeffrey Heer
- Winter 2013 **CS 247: Human-Computer Interaction Design Studio**, *Stanford University*
 Graduate Teaching Assistant for Profs. Jeffrey Heer and Michael Bernstein
- Fall 2012 **CS 147: Introduction to Human-Computer Interaction**, *Stanford University*
 Graduate Teaching Assistant for Prof. Scott Klemmer
- Winter 2012 **HCI Online #001**, *Stanford University and Coursera*
 Graduate Teaching Assistant for Prof. Scott Klemmer

MENTORING

- Fall 2016 Tianyi "Tina" Lin, BS Computer Science & Engineering (UW '17)
- Summer & Fall 2016 Matthew Chun, BS Computer Science & Engineering (UW '18)
- Summer 2016 Yiyang "Amy" Xu, BS Computer Science & Engineering (UW '18)
- Summer 2016 Anjir Hossain, BS Human-Centered Design & Engineering (UW '18)
- Spring 2016 Nikhil Khanna, BS Computer Science & Engineering (UW '18)
- 2015 - 2016 Emily Gu, BS+MS Computer Science & Engineering (UW '16)
- Summer 2015 Ruijia "Iris" Wang, BS Computer Science & Engineering (UW '17)
- 2014 - 2016 Ryan Russell, BS Computer Science & Engineering (UW '16)

SERVICE

- Reviewing IEEE VIS 2014-2016, EuroVis 2014-2016, IEEE TVCG 2015-2016, ACM UIST 2014-2016, ACM CHI 2013-2016, ACM IUI 2012-2015, IEEE PacificVis 2016.
- 2016 Program Committee Member, *OpenVis Conf*
- 2013 Interactive Schedule Chair, *CHI 2013 Organizing Committee*
- 2009 - 2011 Resident Advisor, *Revelle College, UC San Diego*
- 2010 - 2011 Student Conduct Code Re-write Workgroup Student Representative, *UC San Diego*
- 2010 - 2011 Housing, Dining, Hospitality Advisory Committee Student Representative, *UC San Diego*
- Summer 2010 Parent Orientation Leader, *Revelle College, UC San Diego*
- 2009 - 2010 Revelle College Senator, *Associated Students, UC San Diego*
- 2008 - 2009 Director of Communications, *Revelle College Council, UC San Diego*

AWARDS & HONORS

- 2016 IEEE InfoVis Best Paper Award (Vega-Lite)
- 2016 – 2018 Google PhD Fellowship
- 2013 ACM CHI Best Paper Award (Webzeitgeist)
- 2011 – 2014 SAP Stanford Graduate Fellowship, *Stanford University*
- 2011 Outstanding Senior, *UC San Diego Alumni Association*
- 2010 Undergraduate Summer Research Scholar, *Calit2, UC San Diego*
- 2009, 2010 Ernest Mort Award for Excellence in Leadership, *Revelle College, UC San Diego*
- 2009 Tau Beta Pi
- 2008 – 2010 Provost's Honors, *Revelle College, UC San Diego*
- 2005 – 2007 Duke of Edinburgh Bronze, Silver and Gold Awards

PRESS

Information is Beautiful Award Shortlist Nomination. *Kantar, November 2015.*

<http://www.informationisbeautifulawards.com/showcase?acategory=free-tool&action=index&award=2015&controller=showcase&page=1&pcategory=long-list&type=awards>

Apropose Closes \$1.875M Funding Round Led by NEA and Andreessen Horowitz. *PR Newswire, September 2014.*

<http://www.prnewswire.com/news-releases/apropose-closes-1875m-funding-round-led-by-nea-and-andreessen-horowitz-274728751.html>

10 Significant Visualization Developments: January to June 2014. *Visualizing Data, August 2014.*

<http://www.visualisingdata.com/index.php/2014/08/10-significant-visualisation-developments-january-to-june-2014/>

Movable Type Experts Team Up on Melody, an Open Source Publishing Platform. *Techcrunch, June 2009.*

<http://techcrunch.com/2009/06/25/movable-type-experts-team-up-on-melody-an-open-source-publishing-platform/>

Why We Call it a “Community”. *Movable Type, August 2007.*

<http://www.movabletype.com/blog/2007/02/why-we-call-it-a-community.html>

REFERENCES

Jeffrey Heer

Associate Professor of Computer Science and Engineering
University of Washington
jheer@uw.edu

Maneesh Agrawala

Professor of Computer Science
Stanford University
maneesh@cs.stanford.edu

James D. Hollan

Professor of Cognitive Science & Computer Science and Engineering
University of California, San Diego
hollan@ucsd.edu

Scott R. Klemmer

Associate Professor of Cognitive Science & Computer Science and Engineering
University of California, San Diego
srk@ucsd.edu

Martin Wattenberg

Research Scientist
Google Research
wattenberg@google.com

Michel Beaudouin-Lafon

Professor of Computer Science
Université Paris-Sud, France
mbl@lri.fr

Wendy E. Mackay

Research Director
INRIA Saclay, France
mackay@lri.fr