

JOSHUA HOROWITZ

joshuah@alum.mit.edu
http://joshuahhh.com

Cell: 860-424-2108
San Francisco

Experience

- Communications Design Group** — Researcher *January 2016 – present*
Researching topics related to learning and human-computer interaction.
- Coursera Inc.** — Data Analyst / Software Engineer *January 2014 – January 2016*
Guided Learning Experience team with deep analyses of learner behavior and success factors.
Assisted in the design and analysis of rigorous A/B tests.
Built interactive dashboards for MOOC instructors (from ETLs to Javascript).
Developed internal tools for analysts, including custom React/D3 dashboards.
- Google Inc.** — Software Engineer *August 2010 – June 2011*
Designed, implemented, & tested efficient and reliable software for Google's search engine.

Education

- Stanford University** — Graduate Studies in Physics *2011 – 2012*
Pursued research in computational condensed-matter physics and theoretical neuroscience.
TAed electricity and magnetism course.
- Massachusetts Institute of Technology** — B.S. in Physics & B.S. in Mathematics. *2006 – 2010*
Pursued research in amorphous computing, quantum information, and nonlinear dynamics.
TAed classical mechanics and statistical physics courses.
Winner of the "Feynman Writing Prize" for best term paper in Quantum Physics III: "From Path Integrals to Fractional Quantum Statistics".

Projects

- Apparatus:** Direct-manipulation editor for interactive diagrams. (*contributor*)
- Gallery of Concept Visualization:** Gallery of pictures communicating complex and difficult ideas.
- pandas-ply:** Open-source library extending pandas syntax for functional data manipulation.

Publications

- Suk Bum Chung, Joshua Horowitz, and Xiao-Liang Qi, *Time-reversal anomaly and Josephson effect in time-reversal invariant topological superconductors*, Physical Review B, 2013.
- Daniela Buccella, Joshua Horowitz, and Stephen Lippard, *Understanding Zinc Quantification with Existing and Advanced Ditopic Fluorescent Zinpyr Sensors*, Journal of the American Chemical Society, 2011.
- Jonathan Bachrach, Jacob Beal, Joshua Horowitz, and Dany Qumsiyeh, *Empirical Characterization of Discretization Error in Gradient-based Algorithms*, IEEE SASO 2008, October 2008.

Skills

- Experienced with Python (NumPy, Pandas), C/C++, Javascript (D3), CoffeeScript, Scala (Play, Akka), Java, Scheme, Mathematica, Matlab, L^AT_EX, HTML, SQL, Jade, Stylus
- Comfortable working with Git, Phabricator, Perforce, Subversion, Emacs, Eclipse, & Atom.
- Conversant with Linux, Mac OS X, and Windows systems.