

K. Jarrod Millman

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EDUCATION

University of California, Berkeley Graduate school in Biostatistics	<i>2012–present</i>
Cornell University BA in Mathematics and Computer Science Minor in Cognitive Studies	<i>1995–1998</i>
Deep Springs College	<i>1993–1995</i>

WORK HISTORY

University of California, Berkeley, Berkeley, CA Scientific Programmer, <i>Brain Imaging Center</i> Director of Computing, <i>Neuroscience Institute</i> System Administrator, <i>Brain Imaging Center</i>	<i>2010–2012</i> <i>2004–2010</i> <i>2000–2004</i>
University of California, Davis, Davis, CA Scientific Programmer, <i>Center for Neuroscience</i>	<i>1998–2000</i>
Cornell University, Ithaca, NY Research Assistant, <i>Psychology Department</i>	<i>1996–1998</i>
Deep Springs College, Deep Springs, CA Research Assistant, <i>Physiology Laboratory</i>	<i>1994–1995</i>

TEACHING EXPERIENCE

University of California, Berkeley Statistics 133, <i>Concepts in Computing with Data</i>	<i>Summer 2014</i>
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PROFESSIONAL SERVICE

Editorial Review Editor, <i>Frontiers in Neuroinformatics</i> Guest Editor, <i>Computing in Science and Engineering</i> Review Editor, <i>Open Research Computation</i> Review Editor, <i>Frontiers in Neuroscience Methods</i> Proceedings Editor, <i>SciPy Conference</i>	<i>2011–present</i> <i>2011</i> <i>2010–2012</i> <i>2010–2011</i> <i>2008–2013</i>
Committee Neuroimaging Task Force, <i>International Neuroinformatics Coordinating Facility</i> Information Technology Architecture Committee, <i>University of California, Berkeley</i> Campus Information Security and Privacy Committee, <i>University of California, Berkeley</i> Calnet Technical Team, <i>University of California, Berkeley</i>	<i>2010</i> <i>2007–2010</i> <i>2006–2010</i> <i>2005–2009</i>
Conference Program Committee, <i>EuroSciPy</i> Program Committee, <i>Educause Security Professionals Conference</i> Organizer, <i>Open Research Computing in Python</i>	<i>2010–2011</i> <i>2010</i> <i>2010</i>

Chair, SciPy India	2009–present
Chair, SciPy	2008–2011
Program Committee, Secure IT Conference	2007–2009
Software	
Board of Directors, NumFOCUS	2011–present
Steering Committee, SciPy Development Team	2008–2011
Release Manager, Scientific Tools for Python (scipy.org)	2007–2009
Mentor, Google Summer of Code, Python Software Foundation	2007–2009

PRESENTATIONS

National

- Neuroimaging in Python (NiPy) Architecture. *Half-day course at the 19th Annual Meeting of the Organization for Human Brain Mapping entitled 'Neuroimaging Big Data Challenges and Computational Workflow Solutions'*, Seattle, WA, June 2013.
- Reproducibility and Computationally Intensive, Data-driven Research. *Mini-symposium at the SIAM Conference on Computational Science and Engineering entitled 'Reproducibility and Computationally Intensive, Data-driven Research'*, Boston, MA, February 2013.
- The challenge of reproducible research in the computer age. *Mini-symposium at the SIAM Conference on Computational Science and Engineering entitled Verifiable, reproducible research and computational science*, Reno, NV, March 2011.
- A foundation for mathematical and scientific computing. *9th annual Python in Science conference*, Austin, TX, June 2010.
- Codes, keys, and trap doors: Cryptography and the practice of hiding information. *Secure Information Technology Conference for Information Technology and Network Security*, San Diego, CA, March 2008.
- Ensuring Security Policy Compliance by Automating System Configuration. *EDUCAUSE Security Professionals Conference*, Denver, CO, April 2007.
- Mandatory access control and the principle of least privilege. *Secure Information Technology Conference for Information Technology and Network Security*, Sacramento, CA, March 2007.
- Automating security policy implementation. *Secure Information Technology Conference for Information Technology and Network Security*, Anaheim, CA, March 2006.
- fMRI study management and analysis at UC Berkeley. *National fMRI Data Center Meeting*, Dartmouth College, Hanover, NH, January 2006.
- Running a secure Fedora Linux machine. *Information Technology Security Symposium*, University of California, Davis, CA, June 2005.
- High speed networking for functional MRI. *Corporation for Education Network Initiatives in California Conference*, San Diego, CA, May 2002.

International

- The challenge of reproducible research in the computer age. *Workshop at the Applied Mathematics Perspective meeting entitled Reproducible Research: Tools and Strategies for Scientific Computing*, University of British Columbia, Canada, July 2011.
- Experimental data and scientific computing. *SciPy India Conference*, International Institute of Information Technology, Hyderabad, Andhra Pradesh India, December 2010.

- A foundation for mathematical and scientific computing. *SciPy Europe*, École Normale Supérieure, Paris, France, July 2010.
- The SciPy web and documentation tools. *SciPy India Conference*, Technopark, Thiruvananthapuram, Kerala India, December 2009.

PUBLICATIONS

Refereed journal articles

- [1] S. Ghosh, A. Klein, B. Avants, and **K. J. Millman**. Learning from open source software projects to improve scientific review. *Frontiers in Computational Neuroscience*, 6(18), 2012.
- [2] J. L. Teeters, K. D. Harris, **K. J. Millman**, B. A. Olshausen, and F. T. Sommer. Data sharing for computational neuroscience. *Neuroinformatics*, 6(1):47–55, 2008.
- [3] **K. J. Millman** and M. Brett. Analysis of Functional Magnetic Resonance Imaging in Python. *Computing in Science & Engineering*, 9(3):52–55, 2007.

Refereed book chapters and conference proceedings

- [1] **K. J. Millman** and F. Pérez. Developing open source scientific practice. In V. Stodden, F. Leisch, and R. D. Peng, editors, *Implementing Reproducible Research*. Chapman and Hall/CRC, 2014.
- [2] **K. J. Millman** and T. Vaught. The state of SciPy. In G. Varoquaux, T. Vaught, and K. J. Millman, editors, *Proceedings of the 7th Python in Science Conference*, pages 5–10, Pasadena, CA USA, 2008.
- [3] **K. J. Millman** and M. D’Esposito. Data and analysis management for Functional Magnetic Resonance Imaging studies. In *Proceedings of the International Advanced Database Conference*, pages 24–28, San Diego, CA USA, 2006.
- [4] B. A. Olshausen and **K. J. Millman**. Learning sparse codes with a mixture-of-Gaussians prior. *Advances in neural information processing systems*, 12:841–847, 2000.

Editorial articles

- [1] C. Neylon, J. Aerts, C.T. Brown, D. Lemire, **K. J. Millman**, P. Murray-Rust, F. Pérez, N. Saunders, A. Smith, G. Varoquaux, et al. Changing computational research. the challenges ahead. *Source Code for Biology and Medicine*, 7(1):2, 2012.
- [2] **K. J. Millman** and M. Aivazis. Python for scientists and engineers. *Computing in Science & Engineering*, 13(2):9–12, 2011.

Conference abstracts

- [1] **K. J. Millman** and M. Brett. Reproducible research for neuroimaging. In *4th INCF Congress of Neuroinformatics*, 2011.

- [2] S. Ghosh, C. Burns, D. Clark, K. Gorgolewski, Y. Halchenko, C. Madison, R. Tungaraza, and **K. J. Millman**. Nipype: Opensource platform for unified and replicable interaction with existing neuroimaging tools. In *16th Annual Meeting of the Organization for Human Brain Mapping*, 2010.
- [3] M. Brett, J. E. Taylor, C. Burns, **K. J. Millman**, F. Pérez, A. Roche, B. Thirion, and M. D’Esposito. NIPY: an open library and development framework for fMRI data analysis. *NeuroImage*, 47:S196, 2009.
- [4] M. Trumpis, D. Sheltraw, **K. J. Millman**, and M. T. D’Esposito. Python imaging tools for reconstructing magnetic resonance images. *Python for Scientific Computing Conference*, 2006.
- [5] M. Brett, J. E. Taylor, and **K. J. Millman**. Nipy: Neuroimaging software in python. *Python for Scientific Computing Conference*, 2005.
- [6] J. E. Taylor, K. J. Worsley, M. Brett, Y. Cointepas, J. D. Hunter, **K. J. Millman**, J.-B. Poline, and F. Pérez. BrainPy: an open source environment for the analysis and visualization of human brain data. *Neuroimage*, 26:763, 2005.
- [7] D. J. Field and **K. J. Millman**. Learning wavelet-like receptive fields from natural scenes using a biologically plausible decorrelation network. *Association for Research in Vision and Ophthalmology*, 1998.
- [8] **K. J. Millman** and J. M. Szewczak. Nonlinear methods for the analysis of ventilatory control. *The Physiologist*, 37(5):A-64, 1994.

Technical reports

- [1] F. Sommer, B. A. Olshausen, and **K. J. Millman**. Data sharing for computational neuroscience central services. Technical report, National Science Foundation Collaborative Research in Computational Neuroscience Workshop, University of Maryland University College, 7 June 2007.