K. Jarrod Millman

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EDUCATION

University of California, Berkeley *2012–present*
Graduate school in Biostatistics

Cornell University *1995–1998*
BA in Mathematics and Computer Science
Minor in Cognitive Studies

Deep Springs College *1993–1995*

WORK HISTORY

University of California, Berkeley, *Berkeley, CA*
Scientific Programmer, *Brain Imaging Center* *2010–2012*
Director of Computing, *Neuroscience Institute* *2004–2010*
System Administrator, *Brain Imaging Center* *2000–2004*

University of California, Davis, *Davis, CA*
Scientific Programmer, *Center for Neuroscience* *1998–2000*

Cornell University, *Ithaca, NY*
Research Assistant, *Psychology Department* *1996–1998*

Deep Springs College, *Deep Springs, CA*
Research Assistant, *Physiology Laboratory* *1994–1995*

TEACHING EXPERIENCE

University of California, Berkeley
Statistics 133, *Concepts in Computing with Data* *Summer 2014*

PROFESSIONAL SERVICE

Editorial
Review Editor, Frontiers in Neuroinformatics *2011–present*
Guest Editor, Computing in Science and Engineering *2011*
Review Editor, Open Research Computation *2010–2012*
Review Editor, Frontiers in Neuroscience Methods *2010–2011*
Proceedings Editor, SciPy Conference *2008–2013*

Committee
Neuroimaging Task Force, International Neuroinformatics Coordinating Facility *2010*
Information Technology Architecture Committee, University of California, Berkeley *2007–2010*
Campus Information Security and Privacy Committee, University of California, Berkeley *2006–2010*
Calnet Technical Team, University of California, Berkeley *2005–2009*

Conference
Program Committee, EuroSciPy *2010–2011*
Program Committee, Educause Security Professionals Conference *2010*
Organizer, Open Research Computing in Python *2010*

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, 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.