

Miten Jain

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Phone: (716) 536 0379

miten13@gmail.com
<http://mitenjain.com/>

Objective:

Working on cutting edge technologies and big data in a dynamic and challenging environment.

Education/Qualification:

PhD Candidate, Bioinformatics, **University of California, Santa Cruz**
M.S. Bioinformatics, 2013, **University of California, Santa Cruz** GPA: 3.91/4.0
M.S. Biotechnology, 2008, **University at Buffalo, The State University of New York** GPA: 3.77/4.0
B.E. Biotechnology Engineering, 2006, **University of Rajasthan, India** GPA: 81% Honors

Research/Work Experience:

- **PhD Candidate, Bioinformatics; Graduate Researcher, Nanopore Group, UC Santa Cruz, CA [June 2012 – Present]**
Current projects include: developing bioinformatics software to perform computational analysis nanopore data from the MinION nanopore sequencer; developing novel experimental strategies for improving nanopore sequencing performance; modeling nanopore data corresponding to biological polymers (DNA, RNA, and protein) using hidden Markov models, and making predictions using machine learning; analyzing bacterial and human epigenomes from nanopore and sequence data.
Previous projects include: classification and pattern analysis of human centromeric sequences; developing metagenome assembly pipelines.
- **Research Assistant, Nanopores Inc., Yaphank, NY [Jan. 2009 – July 2011]**
Worked on R&D of biomedical imaging and therapeutic applications of metal nanoparticles.
- **Teaching Assistant; Student Assistant, University at Buffalo, The State University of New York**
 - **Department of Biotechnical and Clinical Laboratory Sciences [Aug. 2007 – May 2008]**
Taught undergraduate and graduate labs; graded and corrected papers.
 - **Center for Excellence in Data Analysis and Recognition (CEDAR) [May 2007 – Aug. 2007]**
Project involved verifying machine read data from United States Postal Service.
 - **Department of Physiology and Biophysics [Dec. 2006 – Aug. 2007]**
Prepared and maintained *Drosophila* lines used in research for Huntington disease.
- **Industrial Intern at Ranbaxy Research Laboratories Ltd. Gurgaon, India [Feb. 2006 – June 2006]**
Performed research and development of novel drug candidates.
- **Industrial Intern at Cadila Pharmaceuticals Limited, Ahmedabad, India [Summer 2005]**
Produced a summary report on the company's various divisions.
- **Research Intern at Birla Institute of Scientific Research, Jaipur, India [Summer 2004]**
Worked with *proteases* producing bacteria, from soil samples, to be used as medicinal proteins.

Technical Skills:

Proficient: **Python, MATLAB, R, Bash, Cython, Mac OSX, Linux, Windows (all versions), MS Office, HTML**
Familiar: **Statistical Package for Social Sciences (SPSS), C, C++, DBMS (Oracle).**

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Code Repositories:

- <https://github.com/mitenjain/nanopore>
- <https://github.com/benedictpaten/marginAlign>

Life Sciences Skills:

Proficient: Molecular and cell biology techniques, handling analytical instruments, microbiology techniques, Laboratory animals' certification program.

Publications:

- **Miten Jain**, Ian T. Fiddes, Karen H. Miga, Hugh E. Olsen, Benedict Paten and Mark Akeson. (2015). Improved data analysis for the MinION nanopore sequencer. *Nature Methods*, (ePub: 16 Feb. 2015).
- Karen H. Miga, Yulia Newton, **Miten Jain**, Nicolas F. Altemose, Huntington F. Willard and W. James Kent. (2014). Complete sequence representation across human X and Y centromeric regions. *Genome Research*, 24:697-707.
- Michelle M. Maalouf, **Miten Jain**, Paolo Actis, Nader Pourmand. (2012). Single-cell manipulation using Nanopipettes. *Nanotech*, 2:384–7.
- Jamie Heimburg-Molinaro, Michelle Lum, Geraldine Vijay, **Miten Jain**, Adel Almogren, Kate Rittenhouse-Olson. (2011). Cancer vaccines and carbohydrate epitopes. *Vaccine*, 48:8802-26.
- Vishwas N. Joshi, **Miten Jain**, Frederic R. Furuya, Richard D. Powell, James F. Hainfeld, Marc C. Llaguno, and Donald W. Hilgemann. (2011). HaloTag® Protein-Mediated Live Cell Imaging with Bigger FluoroNanogold™. *Microscopy and Microanalysis*, 17:150-1.
- Vishwas N. Joshi, **Miten Jain**, Frederic R. Furuya, Richard D. Powell, J. F. Hainfeld, Johanna Nelson, Chris Jacobsen, James Quinn, Aaron M. Neiman. (2011). Combined Texas Red and 1.8 nm FluoroNanogold™ for Multimodal Imaging. *Microscopy and Microanalysis*, 17:152-3.
- **Miten Jain**. (2008). Cloning of a sialyltransferase gene to analyze surface sialic acid effects on metastasis. M.S. Thesis @ State University of New York at Buffalo.

Achievements:

- **Internal Vice-President**, Graduate Student Association (GSA), UC Santa Cruz, 2013-2014.
- Awarded **Keck/QB3 fellowship** for graduate studies in bioinformatics at UC Santa Cruz, 2011.
- **Department Representative**, Biomolecular Engineering and Bioinformatics, GSA, UC Santa Cruz, 2011 - Present.
- Awarded **Mark Diamond Research Fund Grant** for Master's Thesis Research at University at Buffalo, NY, 2008.
- **Founder and President, Biotechnology Graduate Student Association** at University at Buffalo, NY, 2007-2008.
- **Vice-President, Graduate Indian Student Association** at University at Buffalo, NY, 2007-2008.
- **President, Tantraa**, an intercultural club at University at Buffalo, NY, 2007-2008.
- Consistently ranked amongst top 3 in various **Singing and Debate Contests, General Knowledge, Cultural and Corporate Business Quizzes**, at School and College levels.