

# Sheena Sharma, PhD

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## SKILLS

- *Programming Languages*: Proficient in MATLAB, SQL, Python
  - *Tools*: Scikit-Learn, Pandas, Numpy, Matplotlib, Seaborn, git, MySQL, Flask, Bootstrap, AWS
  - *Other*: Public speaking/presentation, technical scientific writing and editing, mentoring/leadership, project management, data analysis
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## WORK EXPERIENCE

### **Fellow, Insight Data Science (San Francisco, CA)**

**Jan 2017-Present**

- Created web-app using Amazon Web Services for insurance companies that predicts hospital readmission rates and describes important features for hospital readmission by state: [www.predictingreadmissions.com](http://www.predictingreadmissions.com)
- Developed model to predict hospital readmission rates for heart failure
- Trained and validated a random forest regressor model to predict hospital readmissions using Pandas and Scikit-learn

### **Postdoctoral Research Fellow, Auckland University of Technology, New Zealand**

**April 2016-Oct 2016**

- Independently analyzed a variety of brain scans collected through various techniques (magnetic resonance imaging (MRI), functional MRI, diffusion weighted imaging, and magnetic resonance spectroscopy)
- Wrote bash scripts to carry out analysis of large data sets (over 200gb of imaging data)

### **Sourcing Manager-Science Exchange (Palo Alto, CA)**

**May 2015-Mar 2016**

- Built a recommendation system in python using user purchase history from a MySQL database to recommend products to users
- Regularly presented data and figures to CEO and executive team to inform business decisions
- Provided scientific consulting to researchers to help inform the scope of work across many experiment types, ranging from in vivo studies to multi-session clinical trials

### **Graduate Student Researcher-Northwestern University/Neuralplasticity Lab/Dr. James Stinear**

**June 2008-June 2015**

- Jointly setup a new laboratory of \$100,000 including purchasing, setting up, and validating technical equipment
  - Routinely carried out advanced computation and statistical techniques on large data sets and brain scans using self-written scripts in MATLAB and other similar programming languages
  - Served as a teaching assistant for several graduate and undergraduate level classes in biomechanics and neuroanatomy
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## VOLUNTEER EXPERIENCE

### **Gavel Club (Toastmasters) Volunteer, Auckland, NZ.**

**July 2014 – Dec 2014**

- Delivered one-on-one speech support for patients with Aphasia (Speech disabilities due to stroke)
  - Planned and developed market strategy for annual fundraising event
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## EDUCATION

### **Doctorate of Philosophy, Neuroscience (Movement Rehabilitation Science), Northwestern University, Evanston, IL**

**June 2015**

- Thesis Title: Gait Initiation After Stroke: A Biomechanical and Neurophysiological Approach

### **Bachelor of Arts, International Studies and Biology, The University of Chicago, Chicago, IL**

**June 2008**

- BA Thesis Title: Devising an effective plan to alleviate AIDs in Rwanda

## **TALKS / POSTER PRESENTATIONS / PUBLICATIONS**

1. Sharma S, Lewis, G, Rice DA, McNair P. "Neurophysiological and biomechanical changes during gait initiation in chronic stroke patients." September 2016 (upcoming). *Invited Talk*. University of Technology, Sydney, Australia.
2. Sharma S, Lewis, G, Rice DA, McNair P. "White matter changes in chronic pain." August 2016. *Invited Talk*. Australasian Winter Conference on Brain Research, Queenstown, New Zealand.
3. Sharma S, McMorland AJC, and Stinear JW. "Mediolateral and Anterior Ground Reaction Forces During Gait Initiation in Chronic Stroke." 2014. *Poster*. Australasian Winter Conference on Brain Research, Queenstown, New Zealand.
4. Sharma S, and Stinear, JW, "Using Non Invasive Brain Stimulation to Modulate Anticipatory Postural Adjustments in Chronic Stroke." July 2012. *Poster*. International Society of Electrophysiology and Kinesiology, Brisbane, Australia.
5. Sharma S, McMorland AJ, Stinear JW. Stance limb ground reaction forces in high functioning stroke and healthy subjects during gait initiation. *Clin Biomech*. 2015;30(7):689-95.
6. Sharma, S, McMorland, AJC, Stinear, JW. Erector Spinae Activity Relates to Lateral Ground Reaction Forces During Gait Initiation After Stroke (*accepted with revisions at Clinical Neurophysiology*).
7. Steinle, JJ, Sharma, S, Smith, CP, McFadyen-Ketchum, LS, "Normal Aging Involves Modulation of Specific Inflammatory Markers in the Rat Retina and Choroid", *J Gerontol*. 2009;64A(3):325-331.
8. Steinle, JJ, Sharma, S, and Chin, VC, "Normal Aging Involves Altered Expression of Growth Factors in the Rat", *The J Gerontol*. 2008;63(2):135-40.
9. Smith, CP, Sharma, S, Steinle, JJ, "Age-related Changes in Sympathetic Neurotransmission in Rat Retina and Choroid", *Exp Eye Res*. 2007;84(1):75-81.