Sheena Sharma, PhD

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SKILLS

- *Programming Languages:* Python, SQL, MATLAB
- *Tools:* Scikit-Learn, Pandas, Numpy, MatplotLib, Seaborn, git, MySQL, Flask, Bootstrap, AWS

WORK EXPERIENCE

Fellow, Insight Data Science (San Francisco, CA) **Jan 2017-Present**

- Created and deployed a web-app for insurance companies that predicts hospital readmission rates and describes important features for hospital readmission by state: www.predictingreadmissions.com
- Collected and wrangled 6 unique Medicare datasets with 60+ features
- Trained and validated a random forest regressor model 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)
- Developed reproducible code pipelines to analyze over 200gb of imaging data
- Created and delivered tutorials to colleagues on neuroimaging analysis techniques

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 better inform customer purchases
- Routinely presented data presentations to the executive team in order to inform business and marketing 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 (Evanston, IL) **June 2008-June 2015**

- Jointly setup a new laboratory of $100,000 including purchasing, setting up, and validating technical equipment
- Routinely carried out statistical techniques including Analysis of Variance and principal components analysis 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 (New Zealand) **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

Science Club Mentor, Northwestern University (Evanston, IL) **Aug 2010-Aug 2011**

- Ran weekly basic science labs for underprivileged middle school students
- Jointly designed and taught basic science projects

EDUCATION

PhD, Neuroscience Northwestern University (Evanston, IL) **June 2015**

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

BA, International Studies and Biology, The University of Chicago (Chicago, IL) **June 2008**

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

PUBLICATIONS/TALKS / POSTER PRESENTATIONS

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.