Rick Farouni | Curriculum Vitae

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I am currently a doctoral candidate in quantitative psychology at the Ohio State University. I hold a master's degree in mathematical statistics. I have excellent skills in scientific computing and a strong background in machine learning, multivariate statistics, and Bayesian statistics. My research is focused on latent variable modelling and the statistical analysis of fMRI neuroimaging data. I am passionate about the open access movement in education, research, and academia and I am dedicated to rigorous science in the public interest.

Education

Academic Qualifications

- **The Ohio State University** — **Ohio, USA**
  PhD in Quantitative Psychology — *2012–Present*
  Advisor: Professor Robert Cudeck
- **The Ohio State University** — **Ohio, USA**
  Master of Science in Statistics [GPA 3.80/4] — *2012-2014*
- **The Ohio State University** — **Ohio, USA**
  Master's Degree in Quantitative Psychology — *2012-2014*

  Thesis Project: *'Latent Variable Modelling of Categorical Item Responses in a Hierarchical Bayesian Framework'*
- **The Pennsylvania State University** — **Pennsylvania, USA**
  Bachelor's Degree in Psychology with High Distinction [GPA 3.93/4] — *2011-2012*

Course Projects

- **Multivariate Statistics** (STAT 7560): *'Retinotopic Mapping of the Human Visual Cortex Using Independent Component Analysis'*
- **Advanced Computational Statistics** (STAT 7730): *'Bayesian Analysis of Noisy Images Using Markov Random Fields'*
- **Statistical Consulting** (STAT 6750): *'Modelling Categorical Perception of Speech Sounds using Beta Regression'*

Conference Presentations

- **Joint Statistical Meetings** — **Seattle**
  Poster Title: Across-Subject Predictive Modeling of fMRI BOLD Responses to Faces — *2015*

Awards and Fellowships

- **Graduate Student Conference Presentation Award**
  The Ohio State University — *2015*
- **The Center for Cognitive and Brain Sciences Summer Graduate Fellowship**
  The Ohio State University — *2015*

  Project Proposal: *'Decoding the Pixels of the Face Image from the Voxels of fMRI BOLD Activity Patterns'*
- **The Social and Behavioral Sciences Summer Fellowship**
  The Ohio State University — *2014*
- **University Fellowship**
  The Ohio State University — *2012*

Experience

Teaching Experience

- **Graduate Teaching Associate** — **Ohio, USA**
  The Ohio State University — *2013–present*
  Teaching Assistant for Psychology 2220: Data Analysis in Psychology
- **Test Preparation Instructor** — **Moscow, Russia**
  Instructor of the Graduate Management Admission Test (GMAT) — *2009-2012*
- **Teacher of English as a Foreign Language** — **Moscow, Russia**
  Teacher of General and Academic English — *2001-2009*

Journal Review Service

- **Psychometrika**
  Ad Hoc Reviewer — *2015*
- **Psychological Methods**
  Ad Hoc Reviewer — *2016*

Technical Skill Set

- **Numerical and Statistical Programming:** Proficient in and comfortable transitioning between **R**, **Python**, **Julia**, and **Matlab** depending on computing goals. Strong command of probabilistic programming languages such as Stan and Venture (to a lesser extent).
- **Computing Tools and Web Technologies:** Experience with a variety of technologies such as LaTeX , Linux OS, Git. Basic knowledge in website development tools such as HTML, CSS, and Jekyll.
- **Big Data and High-Performance Computing:** Good knowledge of running numerical analyses on the Ohio Supercomputer Center's main clusters. Basic familiarity with distributed cluster computing using the Spark platform.
- **Deep Learning Software:** Experienced in training deep learning models on GPUs using Caffe, MXNet, and Neon frameworks.
- **Neuroimaging Analysis Software:** Experienced in working with Nipype, PyMVPA, FreeSurfer, Pycortex, SPM and FSL.
- **Bioinformatics Software:** Experienced in analysing gene expression data and next-generation sequencing data (i.e. RNA-seq) using R's Bioconductor set of tools. MOOC Classes taken:
  - HarvardX: PH525.4x Data Analysis for Life Sciences 4: High-Dimensional Data Analysis
  - HarvardX: PH525.5x Data Analysis for Life Sciences 5: Introduction to Bioconductor
  - HarvardX: PH525.6x Data Analysis for Life Sciences 6: High-performance Computing for Reproducible Genomics (enrolled)

Personal Details

- **Country of Previous Residence:** Russia (12 years)
- **Marital Status:** Married
- **Interests and Hobbies:** Evolutionary Biology, World Cuisines, Experimental Music
- **Languages Spoken:** English, Arabic, Russian, Spanish (limited)