Meng Du

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EDUCATION

2019 - 2024 (Expected) **University of California, Los Angeles**
Ph.D Program in Computational Cognition. GPA 4.0/4.0
Advisor: Dr. Carolyn Parkinson

2013 - 2015 **University of Michigan, Ann Arbor**
B.S. with Honors. GPA 3.5/4.0
Majors: 1 Computer Science
2 Biopsychology, Cognition & Neuroscience

2012 - 2013 **University of Minnesota** (Exchange Program) GPA 4.0/4.0

2010 - 2012 **Beijing Normal University** (Transferred) GPA 85/100

RESEARCH EXPERIENCE

2016 - 2019 **UCLA Department of Psychology**
PIs: Dr. Carolyn Parkinson, Dr. Matt Lieberman

- Leading multiple studies using neuroimaging, eye-tracking and behavioral methods.
- Analyzing data with advanced tools such as reinforcement learning models, multivariate pattern analysis of fMRI, etc.
- Developing open-source packages for experiment presentation and meta-analysis.
- Contributing to NeuroSynth, FMRIPREP, etc. via GitHub.
- Developing software tools to streamline data analysis and simplify experiment scheduling.
- Leading Python programming trainings for lab members.

2016 **Princeton Social Neuroscience Lab**
PI: Dr. Diana Tamir

- Built interactive websites for two online studies with HTML/CSS/JavaScript frontend and Firebase backend.

2013 - 2016 **Culture and Cognition Lab (Univ. of Michigan)**
PI: Dr. Shinobu Kitayama

- Completed a study in China on gene and culture through coordination with researchers in Singapore and US.
- Assisted with EEG/ERPs data collection and analysis.

2016 **Univ. of Michigan School of Education**
PI: Dr. Kevin Miller

- Developed an asynchronous Python plugin for multiple eye trackers to share and show each other's gaze positions in real time.

COURSE HIGHLIGHTS

Computational Methods for fMRI
Computer Vision
Data Mining (R)
Machine Learning (Python)
Adv. Object-Oriented Programming
Theory of Neural Computation
Cognition, Computation & Brain

SKILLS

Computer

- **C/C++** .... 30+ projects, 15k+ lines
- **Python** .... 20+ projects, 10k+ lines
  Machine Learning/Deep Learning
  Web Scraping
  GUI & Standalone Applications
  Data Analysis & Visualization
- **HTML/CSS/JavaScript** .....
  10+ websites, 12k+ lines
  CSS Frameworks (*Bootstrap*)
  Frontend Frameworks (*AngularJS*, *Ruby on Rails*)
  Interactive Data Visualization
- **Java** ..... Android Apps
  Cascading Workflows on *Hadoop Distributed File Systems*
- **Git** ..... 30+ repositories
  1k+ GitHub Contributions (Including Code, Issues, Bug Fixes)
- **R** • **Bash scripts** • **MATLAB**
- **Software Design Patterns**
- **Ruby** • **Relational Databases**

Neuroimaging

- **Data Collection** MRI Safety Certified
- **Preprocessing** .. *BIDS*, *FMRIPREP* *FreeSurfer*
- **Data Analysis** ..... *FSL/AFNI* *NiPype*, *NiBabel* MVPA (*Nilearn/PyMVPA*)
- **Visualization** ..... *PySurfer*

RESEARCH EXPERIENCE (cont.)

2014 **Univ. of Michigan Computer Science & Engineering Division** PI: Dr. Emily Provost
- Collected speech data and feedbacks from aphasic patients to enhance a therapy app.

2013 **Univ. of Minnesota Department of Psychology** PI: Dr. Wilma Koutstaal
- Assisted with data collection and analysis for memory and perception studies.

2012 **Univ. of Minnesota Department of Psychology** PI: Dr. Cheryl Olman
- Learned about human visual perception and fMRI; practiced retinotopic mapping with FreeSurfer.

2011 - 2012 **Beijing Normal Univ. School of Psychology** PI: Dr. Renlai Zhou
- Assisted with data collection and analysis for studies on working memory training.

AWARDS, FELLOWSHIPS & HONORS

2019 NeurIPS Travel Award ($500)
2019 Methods in Neuroscience at Dartmouth Computational Summer School (MIND) Fellow
2015 LSA Honors Grants for Research, Travel, and Special Projects ($1000, Univ. of Michigan)
2013, 2014, 2015 University Honors (Univ. of Michigan)
2012, 2013 Dean's List (Univ. of Minnesota)
2012 Study Abroad Foundation Scholarship ($2000)

PUBLICATIONS

Du, M., Basyouni, R., Parkinson, C. (in prep). Shared Neural Architecture for Navigating Space and Social Hierarchies.

Du, M. & Lieberman, M. D. (in prep). NS+: A new meta-analysis tool to extend the utility of NeuroSynth. **[Code & beta software]**

Du, M.*, Weaverdyck, M. E.*, Li, Y., Chang, L. J., Parkinson, C. (in review). Homophily serves as a social prior: The assumption that "birds of a feather flock together" shapes social decisions and relationship beliefs. *Psychological Science*.

* Equal contributions

Lieberman, M. D., Straccia, M. A., Meyer, M. L., **Du, M.** & Tan, K. M. (2019). Social, self, (situational), and affective processes in medial prefrontal cortex (MPFC): Causal, multivariate, and reverse inference evidence. *Neuroscience & Biobehavioral Reviews, 99*, 311-328. **[PDF]**

CONFERENCE POSTERS

Du, M., Lieberman, M. D. (2019). Examining TPJ Functions Using NS+ (A New Meta-Analysis Tool to Extend NeuroSynth Utility). Poster accepted at the 2019 Meeting of the Social and Affective Neuroscience Society, Miami, FL.

Du, M., Basyouni, R., Parkinson, C. (2018). Shared neural architecture for navigating space and social hierarchies. Poster presented at the 2018 Meeting of the Social and Affective Neuroscience Society, Brooklyn, NY.

CONFERENCE POSTERS (cont.)

Li, Y., **Du, M.**, & Parkinson, C. (2018). The relationships between Social Network Attributes and Behavioral Tendencies. Poster presented during the 2018 UCLA Undergraduate Research Week, Los Angeles, CA.

Castro, V., **Du, M.**, Sul, S., & Parkinson, C. (2018). How well would you treat a friend-of-a-friend? The effects of thirdparty relationship knowledge on prosocial behavior. Poster presented at the 2018 Annual Convention of the Society for Personality and Social Psychology, Atlanta, GA, USA.

Hitokoto, H., Glazer, J., **Du, M.**, & Kitayama, S. (2015). "Aren't You More Motivated When Watched?" Culture Moderates the Face-Priming Effect on FRN. Poster presented at the Society for Personality and Social Psychology 2015 Annual Convention, Long Beach, CA.

TECHNICAL & EXTRACURRICULAR EXPERIENCE

2019 **Women in Machine Learning (WiML) Workshop Volunteer** NeurIPS 2019

2016 **Computer Science Tutor** University of Michigan
- Tutored two undergraduate students discrete math, data structures and algorithms in C++.

2015 - 2016 **Freelance Software Developer** - Pigment Incubator - AdHackers, LLC
- Developed a networking website with AngularJS frontend, and managed its communications with the Spring backend in REST API.
- Implemented and tested a hybrid mobile application using AngularJS, Ionic and Cordova.

2015 **Software Engineering Intern** LiveRamp
- Developed cross-team APIs for the Java backend with Apache Thrift framework, and improved the corresponding Ruby-on-Rails frontend with the APIs for better usability and error-checking.
- Investigated code base and wrote bash/Java Cascading scripts to automatically diagnose errors in workflows that ran on the Hadoop Distributed File System.
- Built a hackathon award-winning chrome extension for easy access to knowledge base.

2015 **Software Engineering Intern** Deque Systems, Inc.
- Assisted with the development and testing of an XCode plugin to help developers create iOS apps with better accessibility for blind people; maintained documentation.

Android App Projects

2016 • *Decidable*: Developed this app to help people crowd-source the decisions they cannot make.
2014 • *Evento*: Utilized OCR to automatically parse events from physical flyers to Google calendar events.

2014 **Programmer** MiWorkspace Windows team, Univ. of Michigan IT Services
- Accelerated automatic software deployment with Windows command line and PowerShell scripts.
- Collaborated with the Windows team on testing, trouble-shooting and system administration.

2012 - 2013 **Food Shelf Volunteer** Catholic Charities of St. Paul and Minneapolis

2011 - 2012 **Publicity Chair** School of Psychology Student Union, Beijing Normal University
- Led a team to design posters and other visual materials; helped with event planning.