

Meng Du

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🌐 <https://metad.github.io/mengdu/>

EDUCATION

- 2019 - 2024 (Expected) **University of California, Los Angeles**
Ph.D Program in Computational Cognition
Advisor: Dr. Carolyn Parkinson
- 2013 - 2015 **University of Michigan, Ann Arbor**
B.S. with Honors
Majors: 1 Computer Science
2 Biopsychology, Cognition & Neuroscience
- 2012 - 2013 **University of Minnesota, Twin Cities (Exchange Program)**
- 2010 - 2012 **Beijing Normal University (Transferred)**

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 cutting-edge machine learning tools including reinforcement learning models, fMRI multivariate pattern analysis, etc.
 - Developing open-source packages for experiment presentation and NeuroSynth-based meta-analysis; contributing to NeuroSynth, FMRIPREP, etc. via GitHub.
 - Developing software tools to streamline data analysis and simplify experiment scheduling.
- 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

Data Mining (R)
Machine Learning (Python)
Adv. Object-Oriented Programming
Theory of Neural Computation
Cognition, Computation & Brain
Psychological Statistics

SKILLS

Computer

- **C/C++** 30+ projects, 15k+ lines
- **Python** 20+ projects, 8k+ lines
Machine 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+ Contributions
(Commits, Issues, Pull Requests)
- **R** • **Bash scripts** • **MATLAB**
- **Software Design Patterns**
- **Ruby** • **Relational Databases**

Neuroimaging

- **Data Collection** MRI Safety Certified
- **Preprocessing** .. *BIDS*, *FMRIPREP*
FreeSurfer
- **Data Analysis** *FSL/AFNI*
NiPy, *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.

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 available]
- Du, M.***, Weaverdyck, M. E.*, Li, Y., Chang, L. J., Parkinson, C. (in prep). Assumptions about Birds of a Feather and Those who Flock Together: Social Network Knowledge Shapes and is Shaped by Trust Behavior.
- 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 available]

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.
- 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

- 2016 **Computer Science Tutor** University of Michigan
- Tutored two undergraduate students discrete math, and 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 with REST API.
 - Implemented and tested a hybrid mobile application using AngularJS, Ionic and Cordova.
- 2015 **Software Engineering Intern** LiveRamp (acquired by Acxiom Co.)
- 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 running on Hadoop Distributed File System.
 - Built a hackathon award-winning chrome extension for easy knowledge base access.
- 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.
 - Developed test cases for another instructional iOS app and helped maintain its 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
- Filled the homeless clients' food orders and helped with food intake and organizing.
- 2011 - 2012 **Publicity Chair** School of Psychology Student Union, Beijing Normal University
- Led a team to design posters and other visual materials for university-wide and intercollegiate events; helped with event planning; taught members graphic design skills.

AWARDS & HONORS

- 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)