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** .... 1k+ Contributions
  (Projects, Issues, Bug Fixes)
- **R**   • **Bash scripts**
- **High-performance computing**
- **Software Design Patterns**
- **MATLAB**   • **Ruby on Rails**

Neuroimaging

- **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.

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)