

# Meng Du

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<https://metad.github.io/mengdu/>

## EDUCATION

**University of Michigan, Ann Arbor**

**Sep. 2013 – Dec. 2015**

Bachelor of Science (with Honors)

GPA 3.5/4.0

Major in *Computer Science and Biopsychology, Cognition, Neuroscience (BCN)*

**Beijing Normal University (Transferred)**

**Sep. 2010 – July 2012**

School of Psychology

GPA 85/100

**Studied Abroad at the Univ. of Minnesota (Twin Cities)**

**Sep. 2012 – May 2013**

2012 Fall Study Abroad Foundation Scholarship recipient

GPA 4.0/4.0

## COURSE HIGHLIGHTS

Theory of Neural Computation

Cognition, Computation and Brain

Data Mining (with R)

Machine Learning (with Python)

Artificial Intelligence

Adv. Object-Oriented Programming

Psychological Statistics (with SPSS)

## RESEARCH EXPERIENCE

**UCLA Department of Psychology (PIs: Dr. Carolyn Parkinson, Dr. Matt Lieberman)**

**July 2016 – Present**

- Leading or assisting with multiple neuroimaging and behavioral studies in social neuroscience. Contributed to research ideas, prepared IRB materials, implemented experiments with Python or HTML/CSS/JavaScript, iteratively tested and improved study designs, collected behavioral and structural/functional MRI data, analyzed and visualized data with Python/R/FMRIPREP/AFNI/FSL/PySurfer, and prepared manuscripts for publications and a conference poster.
- Implemented reinforcement learning models for prosocial learning behaviors.
- Developing a Python extension for NeuroSynth, which ranks the average posterior probabilities of all 3107 terms within any given ROI, and compares the probabilities for multiple composite terms against each other.
- Developed general-purpose software tools for data analysis and experiment presentation (e.g. a PsychoPy starter kit).

**Princeton Social Neuroscience Lab, Princeton University (PI: Dr. Diana Tamir)**

**June 2016 – July 2016**

- Built websites for two online behavioral studies with HTML/CSS/JavaScript and cloud databases, which allowed participants to complete a choice reaction time task and an emotion drawing task online.

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

**Sep. 2013 – Aug. 2016**

- Coordinated with researchers in Singapore and US on a large-scale research on gene and cultural difference. Translated questionnaires to Chinese, designed and built a network drawing website for online data collection, collected data both in Beijing and online, and analyzed the behavioral and genetic data. Completed an honor thesis based on partial results.
- Assisted with EEG/ERPs data collection and analysis.

**Univ. of Michigan Department of Psychology (PI: Dr. Kevin Miller)**

**Feb. 2016 – Apr. 2016**

- Developed a multi-threaded Python plugin for OpenSesame (with PyGaze and the Eye Tribe), which allowed two or more eye trackers to share eye movement data remotely in real time.

**Univ. of Michigan Computer Science & Engineering Division (PI: Dr. Emily Provost)**

**May. 2014 – Oct. 2014**

- Collected speech data and feedbacks from aphasic patients to enhance a therapy app.

**Univ. of Minnesota Department of Psychology (PI: Dr. Wilma Koutstaal)**

**Jan. 2013 – May 2013**

- Assisted with behavioral data collection, subject management and data analysis for memory and perception studies.

**Univ. of Minnesota Department of Psychology (PI: Dr. Cheryl Olman)**

**Sep. 2012 – Dec. 2012**

- Learned the basics of human visual perception and fMRI; practiced retinotopic mapping with FreeSurfer.

Beijing Normal Univ. Department of Psychology (PI: Dr. Renlai Zhou)

Sep. 2011 - June 2012

- Assisted with behavioral data collection, subject management and data analysis in 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.\***, Weaverdyck, M. E. \*, Li, Y., Chang, L. J., Parkinson, C. (in prep). Social Network Knowledge Shapes and is Shaped by Trust Behavior.
- Lieberman, M. D., Straccia, M. A., Meghan, M. L., **Du, M.**, Tan, K. M. (in review). Social, Self, (Situational), and Affective Processes in Medial Prefrontal Cortex (MPFC): Causal, Multivariate, and Reverse Inference Evidence. Neuroscience & Biobehavioral Reviews.

## CONFERENCE POSTERS

- **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 third-party 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

### Android App Project: Decidable

Feb. 2016 - Mar. 2016

- Initiated the project and led a team to develop an app that helps people crowd-source the decisions they cannot make.

### Computer Science Tutor

Jan. 2016 - Apr. 2016

- Tutored two undergraduate students at the Univ. of Michigan discrete math, data structures and algorithms in C++.

### Freelance Software Developer

Sep. 2015 - Feb. 2016

*Pigment Incubator; AdHackers, LLC*

- Designed a professional networking website for artists with a start-up team. Developed the frontend framework in AngularJS, and managed its communications with the Spring backend in REST API.
- Implemented and tested a hybrid mobile application using AngularJS, Ionic and Cordova.

### Software Engineering Intern

May 2015 - Aug. 2015

*LiveRamp (acquired by Acxiom Co.)*

- Developed cross-team APIs for the Java backend with the Apache Thrift framework, and improved the corresponding Ruby-on-Rails frontend to use the APIs for higher usability and better error-checking.
- Investigated the code and developed bash/Java Cascading scripts to automatically diagnose errors in a Hadoop system.
- Built a chrome extension for easy knowledge base access, which won the best hackathon project for people.

## Software Engineering Intern

Jan. 2015 – Apr. 2015

*Deque Systems, Inc.*

- Assisted with the developing and testing of an XCode plugin to help developers create iOS apps with better accessibility.
- Developed test cases for an instructional iOS app “Accessibility 101” and helped maintain its documentation.

## Programmer

May. 2014 – Dec. 2014

*MiWorkspace Windows team, University of Michigan Information and Technology Services*

- Accelerated automatic software deployment with Windows command line and PowerShell scripts.
- Collaborated with the Windows team on applications testing, trouble-shooting and system administration.

## Android App Project: Evento

Sep. 2014 – Dec. 2014

- Employed OCR technology to automatically parse events from photos of flyers to organized calendar events.

## Food Shelf Volunteer

Oct. 2012 – Jan 2013

*Dorothy Day Center, Catholic Charities of St. Paul and Minneapolis*

- Filled the homeless clients’ food orders and helped with food intake and organizing.

## Publicity Chair

Sep. 2011 – June 2012

*School of Psychology Student Union, Beijing Normal University; Psychological Health Association, Beijing Normal University*

- Led a team to design posters and other publicity materials for university-wide and intercollegiate student activities.
- Gave talks on graphic design skills, managed and allocated works to members, and participated in event planning.

## AWARDS & HONORS

LSA Honors Grants (University of Michigan)

Mar. 2015

University Honors (University of Michigan)

2013, 2014, 2015

Dean's List (University of Minnesota)

2012, 2013

Study Abroad Foundation Scholarship

Sep. 2012

## SKILLS

### ▪ Computer:

- Advanced skills in C/C++ (30+ projects, 15k+ lines), Python (20+ projects, 8k+ lines), HTML/CSS/JavaScript (10+ websites, 12k+ lines), bash scripts, R and Java.
- Intermediate skills in MATLAB, relational databases, Objective-C, Ruby on Rails, etc.
- Proficiency with Git (30+ repositories, 1k+ commits), web scraping, high performance clusters, and development on Linux/Unix, Windows and Android systems.
- Familiar with various data structures, algorithms (including machine learning algorithms) and design patterns.
- Familiar with the analysis and visualization of behavioral and neuroimaging data in Python and R.

### ▪ Neuroimaging:

- Safety certified at UCLA Brain Mapping Center and Staglin IMHRO Center for Cognitive Neuroscience.
- Familiar with fMRI data collection, preprocessing and analysis with multiple software packages (e.g. FMRIprep, FSL, AFNI, etc.), and NeuroSynth meta-analysis.