# YU JIN (JIN) OH

## yujinoh@stanford.edu | yu.jin.oh84@gmail.com

## **EDUCATION**

University College London MSc in Neuroscience

London, United Kingdom

• Advisor: Dr. Kenneth Harris, Dr. Matteo Carandini, Dr. Kevin J Miller

Class of 2021

- **Degree Classification**: Distinction
- **Distinction**: Kwanjeong Educational Foundation Scholarship (2020, \$30,000)
- Research Interests: Decision-making, Cognitive modeling, Neuropixel recording, Reinforcement learning
  - My research interest lies in the area of computational cognitive neuroscience. I am excited about understanding the neural mechanism and cognitive strategy behind humans or animals solving different cognitive tasks. In alignment with this interest, I want to investigate how natural intelligence can apply their prior knowledge to solve new challenges.
- Certificate of Completion: Neuromatch Academy Deep Learning (2021)
- **Technical Skills**: Python, MATLAB

**Duke University** B.S. in Neuroscience, B.A. in International Comparative Studies

North Carolina, United States

• **GPA:** 3.831 / 4.000 Cum Laude

Class of 2018

• **Distinctions:** Psychology & Neuroscience Undergraduate Travel Award (2018, \$1500), Undergraduate Research Support Travel Grant recipient (2017, \$420), The 11<sup>th</sup> Ok Han-heum Scholarship recipient (2016, \$5000), Dean's List (2014 Fall, 2016 Fall, 2017 Fall)

Duke in Silicon Valley, San Francisco, CA, Summer Study Abroad Participant

**May – June 2016** 

**Duke in China, Beijing, China,** McAnderson Language & Duke Study in China Scholarship Recipient

July - August 2015

# MAIN RESEARCH EXPERIENCE

Stanford University, Moore Lab, Life Science Research Professional I

January 2022 - Present

Advisor: Dr. Tirin Moore

California, United States

- Designed a multi-class classification pipeline for the Neuropixels recording data of the spatial memory task.
- Utilized Thomas In Cage Training System (ICTS) to train nonhuman primates to perform feature-based learning task.
- Analyzed Neuropixels data using **Kilosort** an **Phy** software.

University College London, Cortex Lab, Master's Student

January-November 2021

Advisor: Dr. Kevin J Miller, Dr. Kenneth Harris

London, United Kingdom

- Conducted chronic Neuropixels recording on mice which are trained to do a dynamic two-armed bandit task.
- Utilized qualitative diagnostics and normalized cross-validated log likelihood scores (in Python) to evaluate 9 **cognitive models**, including Q-learning variants, matching law variant, ideal observer variants, and mixture-of-agents model, to find the best fitting model that could capture the mice behavior performing the dynamic two-armed bandit task.

Sungkyunkwan University, Computational Cognitive Affective Neuroscience Lab, Research Assistant Advisor: Choong-Wan Woo

March – August 2018 Suwon, South Korea

- Facilitated 3T fMRI scanning and Biopac data collection. Analyzed 11 different surveys on mind-wandering and depression symptoms of 98 participants and examined bodymap graphs, which participants colored red if felt activated, blue if felt depressed, using MATLAB.
- Researched preprocessing methods for brain, respiration, electrocardiography (ECG) data, and helped preprocessing them using TAPAS code.

**Duke University, Department of Medicine,** Research Assistant

January – June 2017

Advisor: Murali Doraiswamy

North Carolina, United States

- Discovered cortisol as the most significant predictor of change in ADAS-Cog 11 followed by pro-insulin. Extracted data from Alzheimer's Neuroimaging Initiative (ADNI-1) database on patients who changed from LMCI to Alzheimer's Disease (AD) along with their proteomics data over the course of their illness.
- Applied regression models to examine the relationship between log-transformed proteomic markers and ADAS-Cog 11 scores which show the patients' current cognition scores.

Duke University, Center for Advanced Hindsight, Research Assistant

**August 2016 – January 2017** 

Advisor: Dan Ariely

North Carolina, United States

• Derived behavioral patterns of fin-tech users through data analytics to transform low-income individual's saving method, with Common Cents Lab within CAH. Surveyed low-income families in Durham and observed their spending/saving habits.

#### POSTER PRESENTATION

- K.J. Miller, L Freeman, Jin Oh, M.M. Botvinick, K.D. Harris (2022) "Structured credit assignment in mice." The Multi-disciplinary Conference on Reinforcement Learning and Decision Making (2022).
- A. Lebedeva, K.J. Miller, **Jin Oh**, K.D. Harris (2022) "Neural Correlates of Reinforcement Learning Across the Brain." The Multi-disciplinary Conference on Reinforcement Learning and Decision Making (2022).
- **Jin Oh**, K.J. Miller, A. Lebedeva, K.D. Harris (2021). "Comparing cognitive models of dynamic reward learning in the head-fixed mouse." Society for Neuroscience, 2021.
- A. Lebedeva, K.J. Miller, **Jin Oh**, Y. Wang, K.D. Harris (2021) "Recording neurons across the brain during a two-armed bandit task." Society for Neuroscience, 2021.
- **Jin Oh**, SV Srivatsa, K Lin, J Lucas, P. M Doraiswamy (2017). "Proteomic Markers of Cognitive Decline in Subjects at Risk for Alzheimer's." The 2<sup>nd</sup> Annual Center for Aging and Human Development Research and Education Retreat, 2017 & Society for Neuroscience, Washington D.C., 2017.
- Byeol Kim, **Jin Oh**, Jessica Andrews-Hannah, Choong-Wan Woo (2018). "Dynamic Modeling and Brain Decoding of Internal Thoughts and Emotions." Society for Neuroscience, San Diego, 2018.

#### **WORK EXPERIENCE**

Google Korea (provided by Adecco Korea), Seoul, South Korea, Market Insights Marketing Researcher

January – May 2019

- Spearheaded a qualitative market research project and meetings with market research companies to create effective strategies to optimize YouTube's advertisement techniques for cosmetics, OTT, and automobile industries.
- Created a qualitative research report to understand customer segmentation in the cosmetics industry and their behavior in department stores, along with their buying journey.
- Developed an overview report to understand the OTT industry in Korea.
- Developed and designed Korea Market Insights Research Hub website.

## LEADERSHIP EXPERIENCE

Student Representative, London, United Kingdom

September 2020 - September 2021

• Represented the cohort by facilitating communication with staff regarding concerns and needs with the Master's program

Neuroscience Major Union Mentor Program, NC, United States, Mentor

August – December 2018

Met with two mentees weekly to discuss their future career in neuroscience as well as concerns about class materials.

#### ADDITIONAL RESEARCH EXPERIENCE

Duke University, Rubin Lab, Research Assistant

August - December 2018

Advisor: David C. Rubin

Durham, NC

• Created novel research on whether people could remember autobiographical memories as a scene by developing a Qualtrics survey through incorporating film clips and autobiographical memory questionnaires.

Duke University, Science, Law & Policy Lab, Research Assistant

August – December 2017

Advisor: Nita Farahany

Durham, NC

Chosen as a team member of the Bass Connections team "Privacy, Consumer EEG Devices and the Brain." Created an
original paper on "Consumers Attitude Towards Brain Data Privacy." Utilized Qualtrics to understand how much the general
public is concerned about neurotechnology companies obtaining their brain information compared to other types of private
information.

#### LANGUAGE

Languages: English (Native); Korean (Native); Chinese (Advanced, HSK 5); Spanish (Intermediate)