

RUOHAN LIU

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EDUCATION

OXFORD UNIVERSITY

Master of Research MRes Clinical Neurosciences// Supervised by Pr Ben Seymour & Tim Denison

Oxford-UK
2023-Present

- Under the division of Nuffield Clinical Neurosciences (NDCN) and Institute of Biomedical engineering (IBME)
- Project design using neuroimaging studies on the prevention of sport injury through examination of mental toughness and 'effort-reward paradox'

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Visiting student in Department of Brain and Cognitive sciences// Supervised by Pr James di Carlo

Boston, US
Present

- Studying object recognition in macaques using deep brain stimulation in the inferior temporal cortex

UNIVERSITY COLLEGE LONDON

Bachelor of Science With Honours, BSC Biomedical Science // Supervised by Pr Patrick Haggard

London-UK
2020 - 2023

- Concentration: Neuroscience (Computational and Cognition)
- Relevant courses: Pharmacology, Neural Computation, System Neuroscience, Cognitive Neuroscience, Human Neuroanatomy, Biochemistry, Biophysics

GATSBY CENTRE OF COMPUTATIONAL NEUROSCIENCES

Summer Bridging Programme on Maths for Theoretical neurosciences

London -UK
2023

- Full time summer course exploring three general math's topics: Linear Algebra, Calculus, Probability
- Coding workshops and tutorials to apply this knowledge into context of machine learning, neural networks, etc

BRITISH COUNCIL SCHOOL OF MADRID

Spanish Baccalaureate (Evau) 12.9/14

Madrid, Spain
2014 - 2020

Highschool

- Relevant classes: Physics, Chemistry, Biology, Maths, Psychology

RESEARCH EXPERIENCE

INSTITUTE OF COGNITIVE NEUROSCIENCE UCL, PATRICK HAGGARD RESEARCH LAB

London, United Kingdom

Internship/Last Year Project

January 2022 – June 2023

- Performed EEG set up and testing to measure readiness potential
- Preprocessed and analysed EEG data using MATLAB toolbox
- Experienced with participant recruitment platform Sona
- Managed Psych toolbox in MATLAB to create stimuli for study

MAX-PLANCK INSTITUTE OF REGENERATIVE MEDICINE GUANGZHOU

GuangZhou, China

Internship

August 2021 – October 2021

- Culturing of Liver stem cells using EGF, PDGF, IGF-1 and utilization of light microscopy to record progress HLSCs regeneration after hepatic injury in vitro
- Performance of Western Blot to identify proteins expressed by each type of embryonic liver stem cell to interpret which is crucial for proliferation
- Identification of mRNA responsible for transcription in HLSCs using microarray analysis
- Obtained mice testing permit to investigate differentiation patterns of embryonic human liver stem cells in immunodeficient mice models in vivo
- Application of previous knowledge on deep learning MATLAB models to accelerate identification of carcinoma cells from microscope images

WORK EXPERIENCE

SIEMENS HEATHINEERS MAGNETIC RESONANCE SHENZHEN

ShenZhen, China

Internship

June 2021 – August 2021

- Aided fMRI scanning of participants of heart and brain. Training of independent usage of fMRI
- Visualizing whole manufacturing process of a fMRI scan better helped understand physics background of fMRI
- Identification of individual spike artifacts to further isolate and study
- Pre-processing of fMRI data before visualization, including slice time correction and fitting model assumptions using MATLAB

REMOTE PRODUCT MANAGING INTERNSHIP TENCENT

ShenZhen, China

Internship

January 2021 - December 2021

- Managed a newly launched Dancing App with the purpose of improving wellbeing and fitness of people during quarantine
- Organized weekly group meetings regarding the feedback questionnaires
- Conjured up improvement methodologies of the product based on customer feedback and product development department tangibility
- Conduct market research and compare existing advantages of our product in the market
- Leader of group to put forward our marketing strategy in meetings

LEADERSHIP

STUDENT REPRESENTATIVE OF BIOMEDICAL SCIENCE (UCL)

January 2021 - December 2022

- Bridge of communication between students and module, course, and department professors
- Recruitment and anonymization of feedback for modules and exam organizations to aid improvement and raise concerns.
- Represent student community on how department finance should be distributed to enhance well-being among students

HUAWEI STUDENT AMBASSADOR (HSD)

London, United Kingdom

Student Ambassador

January 2021 - December 2022

- Organized technology and coding events for students at UCL
- Networking events, research competitions advertisement and career fairs

HARVARD COLLEGE ASSOCIATION LEADERS FOR US-CHINA RELATIONS

HangZhou, China

Teaching Assistant

January 2021 - December 2021

- Organization of two modules: Introduction to Molecular Biology & Machine Learning
- Succeeded in advising high school students and inspiring on future college choices
- Full responsibility on class schedule of students and lecturers for 2 weeks as well as leisure activity
- Increased online lecture participation by introducing special awards based on participation

BIOBOAT

Online platform

Editorial Department Leader

January 2021 - December 2021

- BioBoat Community Leader
- Co-founder of editorial department of BioBoat platform (responsible for intercommunications between laboratories/companies and Biology related major students)
- Created internship information for subscribers and non-professional articles based on research novelties to a wider public.
- Content has spurred a growth of subscribers from last year ranging a large diversity of biology student community all over the world

VOLUNTEERING

RUMANIA DISABLED CHILDREN'S ORPHANAGE (HOUSE OF ANGELS)

Gaesti, Rumania

Volunteer

January 2019 - December 2019

- Organized recruitment of donations for children in orphanage
- Developed social events and intellectual challenges for better group cohesion among children with different disabilities

LANGUAGES AND SKILLS

- Spanish (native) | Chinese(native)| English (C2) |French (Elementary)
- LinkedIn: <https://www.linkedin.com/in/ruohan-liu-b6116a117>
- Coding languages: Matlab, Python, R, SQL
- Useful tools: stata, excel, LaTeX, google collab, EEG setup

RESEARCH PAPERS/POSTER PRESENTATION

- **Representations, consciousness memory in goal-directed behavior (*in preparation*)** With poster on same paper London, UK
June 2022 – June 2023
- **Exploring the Effort-Reward Paradox in sports under the experimental paradigm of DOMS model** Oxford, UK
Oxford Neuroscience symposium
Inaugural Annual Conference of the Podium Institute for Sports Medicine & Technology 2024

