

Curriculum Vitae/Resume

Pratitee Ghosh

Email : ✉ prghoshg37@alumnes.ub.edu

EDUCATION

Universitat de Barcelona	Spain
• <i>Masters in Neuroscience ; GPA : 7.68/10</i>	2024 – 2025
University of Calcutta	India
• <i>B.Sc. (Honors) Chemistry ; GPA: 7.98/10</i>	2020 – 2024

RESEARCH PROJECTS

Whole-Brain Modelling and Whole-Brain Dynamical Analysis in Alzheimer’s disease	Spain
• <i>Master Thesis</i>	Nov 2024 - Jul 2025
<i>Prof. Gustavo Deco and Dr. Jakub Vohryzek, Universitat Pompeu Fabra, Barcelona, Spain</i>	
◦ Whole-brain Modelling: Applied Hopf bifurcation models and gradient algorithms to derive Generative Effective Connectivity(GEC) matrix from ADNI data.	
◦ Biomarker: Identified novel network biomarkers for early disease stages, potentially enabling better diagnosis and monitoring.	
Investigating Bold Activation	India
• <i>Research Training</i>	Jun 2024 - Jul 2024
<i>Neuromatch Academy</i>	
◦ HCP dataset : Performed Exploratory Data analysis for functional connectivity of Default Mode Network and Emotional Processing using Python with the data extracted from the Human Connectome Project.	
◦ Contrast Study : Examined the difference between the functional connectivity for fear versus neutral emotion processing	
◦ Prediction : Investigated the use of the generalized linear model for the prediction of the emotional states.	
Drug Design	India
• <i>Research Assistant</i>	Sept 2022 - July 2023
<i>Prof.Nayim Sepay, Ph.D., Lady Brabourne College, Kolkata</i>	
◦ Objective: Study protein-small molecule interaction of DPP-4 to identify suitable inhibitors to control and treat type 2 Diabetes	
◦ Protein Data Bank: Analysed data of 106 protein-ligand crystal structures by curating from Protein Data Bank and studying their bonding structure and active residue sites.	
◦ Results: Residue site of Y662, E205 and Y547 were the most active site for binding, over 30% of ligands binded at this sites, and conventional H-bond was the type of major bonding and is responsible for almost 1/3 fraction of all bonds.	

INTERNSHIPS

Mind’s eye	India
• <i>Psychological Counselling</i>	Mar 2024 - May 2024
<i>Dr. Rupa Talukdar</i>	
◦ Counselling: Shadowed Dr. Talukdar in clinical sessions and assisted her by taking meticulous notes and creating comprehensive reports.	
Indian Institute of Management Mumbai	India
• <i>Data Science</i>	Dec 2023 - Jan 2024
<i>Prof. Manoj Kumar Tiwari</i>	
◦ Network Data: Constructed a metro network by cleaning and pre-processing spatial metro ridership traffic data.	
◦ Criticality Analysis: Extracted the time-varying critical metro stations based on the temporal centrality of the network.	

RELEVANT COURSEWORK

◦ Graduate		
* Analysis of Neuroimage	* Computational Neuroscience	* Basics of Cognitive Neuroscience
◦ Deep Tech Brain Program		
* Deep Tech Brain: Artificial Intelligence	* Deep Tech Brain: Neuromodulation	
* Deep Tech Brain: Virtual Reality	* Deep Tech Brain: Neuroimaging	
◦ Coursera		
* Advanced Neurobiology I	* Principles of fMRI	* Fundamental Neuroscience for Neuroimaging

SKILLS AND ACHIEVEMENTS

◦ Got selected for the MSc in Cognitive Science program at IIT Gandhinagar from a pool of 150 shortlisted for interview.
◦ Programming Language: Python, MATLAB, JAVA and Fortran
◦ Software: Excel, Discovery Studio, Unity, SPM, FSL, DTIstudio