# **Osheen Jain**

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Experienced cognitive neuroscience researcher with a strong focus on EEG-based BCI systems and neurotechnology. Skilled in experimental design, data collection, and analysis using Python, MATLAB, and machine learning techniques. Adept at supporting children with special educational needs, including Autism, ADHD, and multisensory impairments, through tailored interventions. Seeking a PhD position to contribute to cutting-edge neuroscience research, utilizing my technical expertise and analytical skills to advance innovative solutions and insights in the field.

### WORK EXPERIENCE

### EEG Research Assistant

#### Neurolive – ERC-Funded Project | Oct 2024 – Nov 2024

- Configured gel-based EEG systems for live neuroscience experiments in a creative context, integrating contemporary dance performances.
- Collaborated with a multidisciplinary team to ensure accurate data collection in dynamic environments.

### Richard Wright Music Ltd | May 2024 - June 2024

- Conducted EEG sessions during "Brainstorms: A Great Gig in the Sky," capturing neural responses to music using Emotiv headsets.
- Ensured seamless data acquisition by guiding participants through EEG setup, troubleshooting technical challenges, and ensuring high-quality recordings.

### **Neurotechnology Researcher**

LiquidWeb s.r.l. | Nov 2022 - Sep 2023

- Designed and implemented data pipelines to process and analyze EEG datasets collected with Biosemi ActiveTwo systems.
- Applied machine learning techniques, including SVM and CNN models, to classify neural responses from highdimensional EEG data.
- Conducted data preprocessing using Python libraries like NumPy, Pandas, and SciPy, optimizing signal quality and ensuring robust analysis.
- Led an experimental paradigm to explore the impact of emotional stimuli on visual imagery, contributing actionable insights to neurotechnology applications.

### **TEACHING and WRITING EXPERIENCE**

#### **Teaching Assistant**

Zen Educate | Apr 2024 – Present

- Supported students with ADHD and autism by implementing individualized strategies to foster engagement, enhance focus, and promote positive learning outcomes.
- Collaborated with therapists, teachers, and parents to tailor educational approaches, ensuring alignment with neurodiverse students' needs and goals.
- Leveraged assistive technologies and innovative methods to create inclusive, sensory-friendly learning environments.

#### **Freelance Data Analyst and Writer**

Self-Employed | Apr 2015 - Present

- Partnered with 20+ organizations to deliver data-driven insights and high-quality content, spanning technical blogs, white papers, and analytical reports.
- Produced 100+ deliverables, ensuring timely completion and alignment with client objectives across various industries.

### SKILLS

- EEG Analysis: EEGLAB, MNE Python, BioSemi ActiveTwo, EPOC X, EmotivPRO, EmotivBCI
- Languages: MATLAB, Python, MySQL, Java, BSL, Makaton
- ML Libraries: Scikit-Learn, TensorFlow, Keras
- Data Analysis: Pandas, NumPy, SciPy
- Statistics: Jamovi, SPSS
- Technologies: Google Suite, Asana, Trello, Slack, GitHub, Git, BitBucket

### **EDUCATION**

### M.Sc. Computational Cognitive Neuroscience

Goldsmiths College, University of London | Sep 2023

#### M.A. Philosophy

University of Delhi, New Delhi | Aug 2020

**Project:** Concept Ontology: Fodorian Atomism vs. Embodied Grounding **Paper Presentation:** What Does Robotics Offer in Our Understanding of Behavior and Cognition?

### **B.E. Electronics and Communication**

Sagar Institute of Research and Technology, Bhopal | Aug 2018

### **PUBLICATIONS**

#### **Research Papers**

• Mushfika Sultana, **Osheen Jain**, Sebastian Halder, Ana Matran-Fernandez, Rab Nawaz, Reinhold Scherer, Ricardo Chavarriaga, José del R. Millán, Serafeim Perdikis. "Evaluating dry EEG technology out of the lab". Presented at IEEE MetroXRAINE, 2024.

#### Theses

- Jain, O. (2023). Investigating the Effect of Emotional Stimuli on Visual Imagery Performance in EEG-Based BCI Systems. M.Sc. Thesis, Goldsmiths College, University of London.
- Jain, O. (2021). The Effect of Auditory Simulation on Attention in Adults. PGD Thesis, Panjab University, Chandigarh.

# CERTIFICATION

## **Introduction To Good Clinical Practice (GCP) eLearning 2024** NIHR

### Foundations of Data Science

Google

Sep 2024

July 2023