Diego Asua

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Experience

Research Associate
NYU Langone Health

Oct 2020 - Sep 2021 (1 year)

• Explored machine learning solutions for image denoising with application to point-scanning multi-photon diffractive microscopy, used for optical closed-loop brain machine interfaces.
• Analysis of data from ultrasound neurostimulation device at scale in a one of the most powerful high-performance parallelized (cloud) computing clusters of the US.
• Collected data with a custom-built multi-photon scope for research of basic mechanisms of odorant detection, discrimination and behaviour modulation to reverse-engineer neural circuits underpinning olfaction.
• High-energy laser diffractive optics

Research Assistant
Max Planck Institute for Biological Intelligence (in foundation)

Oct 2019 - Jul 2020 (10 months)

• Software engineering: GUI design, serial comm., data pipelines, multiprocessing, JIT, Object-Oriented programming
• Data science: Analysis pipelines with Pandas and Numpy, visualization with Matplotlib, Seaborn and Altair
• Co-developed a microscope suite for 3-D optical brain-reading at scale with GPU-accelerated live 3D visualization, and Qt for GUI.

Secretary
Oxford University Cortex Club

May 2019 - Aug 2019 (4 months)

• Preparing agenda for meetings
• Hosting speakers from top universities around the world
• Writing meeting minutes
• Collaborating with several UK trusts and incubators

Vice President & treasurer HCR
Brasenose College, Oxford

Mar 2019 - Aug 2019 (6 months)

• Budgeting
• Reimbursements
• Bimonthly meetings with college board
• Dealing with financial institutions from the university

• Executive decisions for the committee

Researcher
Basque Center for Biophysics

Jan 2016 - Jun 2018 (2 years 6 months)

• Large-scale computer-aided drug screening with machine learning and rigid molecular simulations (Docking).
• Various experiments in neuroscience involving molecular assays and electrophysiology

Researcher
Cima Universidad de Navarra

Jun 2017 - Jul 2017 (2 months)

• Researcher in molecular mechanisms of lung and colon cancer, new therapeutic targets.

Education

University of Oxford
Master of Science - MS, Neuroscience

2018 - 2019

Universidad del País Vasco/Euskal Herriko Unibertsitatea
Bachelor's degree, Biochemistry

2014 - 2018

International Baccalaureate

Sep 2011 - Jun 2013

Skills

python • pandas • Seaborn • Scikit-Learn • NumPy • PyTorch • Altair • html css • Machine Learning • MongoDB