Position Offered: PREDOCTORAL RESEARCHER

Project: *Development and Implementation of AI for animal behavior and neuronal activity analysis and integration*

Technological and scientific fields: Artificial Intelligence, Massive data and information processing technologies, and Image analysis and computer vision

Location: Av. Del Dr Arce 37, Madrid, Madrid. Instituto Cajal (IC) https://cajal.csic.es/

Research Group/PI: Jercog Team/ IP: Pablo E. Jercog (co-PI: Liset M. de la Prida)

PROJECT SUMMARY

This project aims to develop sophisticated tools for analyzing animal behavior coupled to brain activity in neuroscience labs. This project also aims training the PhD student candidate to create and implement cutting-edge AI technologies for animal behavior and its integration with neuronal activity, seeking to provide deeper insights into the neural mechanisms in health and disease. The applicability of these techniques span a large range of research areas from neuroscience to ecology, from clinical research to shoppers behavior in retail stores. The training can significantly change the future professional career for the applicants.

PROFESSIONAL PROFILE

Minimum requirements:

Candidates must have a Masters in neuroscience, bioinformatics ingeneering, computer science, physics, math or related fields. Should have a mínimum level of programming skills, in Python, Matlab or R. Should be proficient in english

Merits to be considered:

- Experience using mathematical or machine learning tools for data analysis
- Master research project (e.g. TFM) related the the analysis of real data.

WHAT IS OFFERED

The training scheme is designed to train predoctoral students with the necessary skills and knowledge to achieve the objectives of developing AI tools for analyzing animal behavior in a neuroscience lab. The program will combine theoretical instruction with hands-on experience, covering essential topics in AI, machine learning, computer vision, data processing, and neuroscience. Candidates will be trained in Introduction to Artificial Intelligence and Machine Learning, Deep Learning for Behavioral Analysis, Computer Vision and Image Processing, Data Collection and Annotation. The candidate will also participate in conferences and visits to our collaborators labs.

Contract conditions:

Predoctoral Researcher contract of 4 years' duration. Gross annual salary of 23,871.33 €.

Start of contract: before 31 December 2024

PRINCIPAL INVESTIGATOR CONTACT

Email: pjercog@cajal.csic.es; pjercog@gmail.com (preferable)

Phone: +34 620562808 Pablo Jercog's cell-phone

momentum@csic.es | https://momentum.csic.es/

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