

# Position Offered: POSTDOCTORAL 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 junior researchers 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 PhD in neuroscience, bioinformatics engineering, computer science, physics, math or related fields.
- Should have a minimum level of programming skills, in Python, Matlab or R.
- Should be proficient in english

#### Merits to be considered:

Important merits to be positively valued are:

- Experience analyzing animal or human behavior
- Experience in research (i.e. solid publication record in the related fields)
- Experience in research coordination

### WHAT IS OFFERED

The training scheme is designed to equip junior researchers 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:

Indefinite contract for a Postdoctoral Researcher associated to the Momentum Project of 4 years' duration according to Spanish science law. Gross annual salary (41.000 € - 52.000 €).

**Start of contract: before 31 December 2024**

### PRINCIPAL INVESTIGATOR CONTACT

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