

# Postdoc in Barcelona on AI for Disease Prediction



The Artificial Intelligence in Medicine Lab is offering an exciting postdoctoral position at the University of Barcelona to develop new trustworthy AI algorithms for predicting depression and cardio-metabolic disease from heterogeneous biomedical data.

## We offer:

- A research position in beautiful Barcelona and its Mediterranean climate.
- Research experience within a prestigious university (1st position in Spain).
- Cutting-edge research in AI for healthcare in one of the most dynamic research groups in Europe (12 active projects including an ERC grant).
- An international research environment by joining a multi-cultural team representing all continents.
- Opportunities to collaborate with international and inter-disciplinary collaborators as part of the European projects.
- Support in career development (e.g. grant applications, supervision of PhD students).
- Travelling opportunities to scientific events, project meetings and international stays.
- Freedom to independently conduct research and contribute with own ideas.
- Flexible working hours, with possibility to telework.
- Competitive salary equivalent to Assistant or Associate Professor at the University of Barcelona, depending on experience.
- Contract duration until the end of the projects, with the possibility to extend the contract as part of other grants within the lab.

## Requirements:

- PhD in computer science, data science, mathematics, applied mathematics, physics, statistics, biomedical informatics, computer vision, medical image computing, biomedical engineering, or equivalent.
- A publication record in relevant peer-reviewed journals and/or conferences.
- Machine/deep learning algorithms.
- Biomedical data science.
- Excellent programming skills in Python and/or C++.
- Proficient English, both oral and written.
- Enthusiasm about research and medical applications of AI.
- Aptitude to work independently, lead project deliverables and meet deadlines.
- Good team spirit and participation to the lab's scientific life.
- Aptitude to collaborate with local and international project partners (including technical and clinical collaborators).

## Desirable but optional skills:

- Probability and statistics.
- Mathematics and/or applied mathematics.
- Bias detection and correction.
- Transfer learning and domain adaptation.
- Uncertainty estimation.
- Federated learning.
- Bioinformatics and/or Biomedical informatics.
- Biomedical engineering.
- Personalised and/or precision medicine.
- Digital health.

## The research projects:

You will join our 'Exposome AI team' as part of ongoing projects such as LongITools ([www.longitools.org](http://www.longitools.org)) and EarlyCause ([www.earlycause.eu](http://www.earlycause.eu)), funded by the European Commission. In these projects, we are developing new trustworthy AI methods for predictive modelling of depression and cardio-metabolic disease from multi-source biomedical data (including clinical, biological, imaging and environmental data). In particular, we are interested in new AI models which, once applied in real-world practice, will be fair across population groups, generalisable across clinical sites, robust against data variations, explainable for clinical use, and respectful of data privacy. Hence, we are investigating a wide range of approaches, including transfer learning, bias correction, domain adaptation, generative modelling, uncertainty estimation, explainable AI and federated learning. Should you join our team, you will collaborate with several technical and clinical partners within Europe (e.g. in the Netherlands, the UK, Finland, Italy, Spain, Croatia, Poland).

## Work conditions:

- Full time position
- Gross salary per year: €35,000 - €45,000 (depending on experience)
- At least two years, with possibility to extend

Each application will be reviewed individually, hence motivated and talented candidates who do not fulfil all requirements may be considered.

We ensure equal employment opportunity without any discrimination based on sex, gender, age, nationality, ethnicity, religion, sexual orientation, disability, civil status, parental status, pregnancy, childbirth or any medical condition.

## Apply now:

Send your CV and cover letter to : [paloma.fernandez@ub.edu](mailto:paloma.fernandez@ub.edu) with the subject: 'Postdoc position - AI Exposome'

More information about the lab: [www.bcn-aim.org](http://www.bcn-aim.org).

