INTERNATIONAL CALL IC43_24

JOB TITLE

Intelligent Decision Support Systems for the prediction of Diabetic Retinopathy Evolution

Researcher career profile (R2)

JOB DESCRIPTION

The Pere Virgili Institute for Health Research (IISPV) is an institution that integrates research in the field of biomedicine in the "Camp de Tarragona" and the "Terres de l'Ebre". The IISPV is the instrument that the university hospitals of both health regions have been endowed with (Joan XXIII University Hospital of Tarragona, Verge de la Cinta Hospital of Tortosa, Sant Joan de Reus University Hospital, Institut Pere Mata University Hospital of Reus) and Rovira and Virgili University, in order to bring together and manage biomedical research and innovation in the territory.

This job position belongs to the Ophthalmology research group at IISPV. This is a research group recognized with the "Consolidated" label by the Catalan Research Agency (Government of Catalonia). The ophthalmology research group is focused on two specific areas: research into high-prevalence retinal diseases (diabetic retinopathy, age-related macular degeneration, myopia and vascular occlusions) focusing on developing systems. to help the clinical diagnosis for these diseases and, at the same time, to develop automatic reading systems in them.

The job position is linked to the internacional research project Diabetic Retinopathy risk assessment using image-based deeplearning and clinical variables (RetinaReadRisk) that has received co-funding from the European Institute of Innovation and Technology (EIT) Health and the European Union under Grant Agreement 230123. Its main goal is to build clinical computer-based decision support systems to improve the diagnosis and follow-up of diabetic retinopathy (DR). The goal is to obtain new computer models for the prediction of DR grade evolution using temporal data from clinical and analytical risk factors. Artificial Intelligence methods will be used to build such intelligent models, specially focusing on machine learning techniques and decision support algorithms.

Number of available positions:1

The selected candidate will perform the following tasks:

1. Design and development of new DR evolution models.
2. DR patient's data pre-processing.
3. Testing of the new models with patient's data.
4. Publication of the results in rellevant journals and conferences.

CANDIDATE PROFILE & REQUIREMENTS

- Degree in Computer Engineering.
- The researcher must have a Doctorate degree (PhD) in Computer Science.
- Minimum 3 years of demonstrable experience in research and applications in Artificial Intelligence field, especially in Machine Learning or Decision Support System.

IT WILL BE VALUED

- Knowledge of programming languages (mainly Java, R, Python).
- Advanced skills in Machine Learning algorithms design and implementation.
- Applications and analytic tools used in Health-care problems.
- Previous experience in similar projects.

LABOUR CONDITIONS

- Full-time position
- Workplace: Hospital Universitari Sant Joan de Reus
- Contract: Indefinite - scientific-technician, linked to the RetinaReadRisk project (duration approximately 3 months)
- Gross annual salary: 25.000€ - 26.000€
- Starting date: 1st October 2024.

SELECTION PROCEDURE

- Selection of CV's. Suitable and unsuitable CV's will be identified according to the requirements. Applicants who do not meet the

requirements indicated in the candidate profile and requirements will not pass to the next phase.

- Evaluation of the CV. Evaluation of the CVs up to a maximum score of 50 points.
- Cover Letter. Attach to the resume a cover letter with a maximum length of 2500 characters with spaces. With a maximum score of 20 points.

To access the interview phase it is necessary to have obtained a minimum score of 30 points in the sum of scores of the evaluation of the curriculum and cover letter

- Personal interview. With a maximum score of 30 points.

Items	**30**
Attitude	5
Fit in the work place	10
Experience, developed functions/skills	10
Teamwork	5

SELECTION COMMITTEE

- President: Dr. Pere Romero (IP RetinaReadRisk, Cap Oftalmologia Hospital Universitari Sant Joan de Reus)
- Chair 1: Dr. Marc Baget (Researcher RetinaReadRisk)
- Chair 2: Aida Valls (Researcher RetinaReadRisk)

SUBSTITUTES:

- President: Dr. Isabel Mendez (Cap Clinic Oftalmologia)
- Chair 1: Dra. Esther Santos (Researcher RetinaReadRisk)
- Chair 2: Dr. Toni Moreno (Researcher RetinaReadRisk)

CANDIDATURES

- The CV must include the DNI/NIE number or another personal identity document number.
- Send the CV and the Cover Letter through the IISPV website. **https://www.iispv.cat/treballa-amb-nosaltres/**

For any questions or queries: recruitment@iispv.cat

DEADLINE FOR RECEIPT OF CV 11/09/2024

COMMUNICATIONS

The IISPV will notify the candidates of the results of the different phases of the selection process through its website.

HR EXCELLENCE IN RESEARCH

The IISPV has the European accreditation The Human Resources Strategy for Researchers (HRS4R), complies with the general principles of the European Charter for Researchers and the Code of Conduct for the recruitment of researchers.

The IISPV has an internal recruitment policy that follows the Open, Transparent and Merit-based Recruitment (OTM-R) policies. More information about the HRS4R policies implemented at the IISPV is available on the following website: https://www.iispv.cat/hrs4r-hr-excellenceresearch/

The IISPV will guarantee the right to equal opportunities and treatment, as well as the real and effective exercise of rights by people with disabilities under equal conditions with respect to other citizens, through the promotion of personal autonomy, universal accessibility, access to employment, inclusion in the community and independent living and the eradication of any form of discrimination, in accordance with articles 9.2, 10, 14 and 49 of the Spanish Constitution and the International Convention on the Rights of Persons with Disabilities and international treaties and agreements ratified by Spain.

In the event of a tie, priority will be given to hiring the person with a disability.

In the event of a tie between people of different genders, the person of the least represented gender in the work group/department/service in which he joins will be hired.