

JOB OFFER

Position in the project:	Student
Scientific discipline:	Computer science/Mathematics/Physics
Job type (employment contract/stipend):	Scholarship
Number of job offers:	1
Remuneration:	1 500 PLN monthly (scholarship)
Position starts on:	1 March 2023
Maximum period of contract/stipend agreement:	6 months (until 31/08/2023)
Institution:	Jagiellonian University, Cracow
Project leader:	Jacek Tabor
Project title:	Bio-inspired artificial neural networks <i>Project is carried out within the TEAM-NET programme of the Foundation for Polish Science</i>
Project description:	Artificial neural network model was created basing on analogies to biological counterparts, such as a simplified model of the neuron or a system of retinal neurons. Due to the increasing complexity of tasks and problems with the development of effective methods for learning deep neural networks, solutions based on algebraic structures dominate Today, advanced approaches in machine learning such as deep learning show a number of undesirable features, such as forgetfulness, susceptibility to adversarial examples, the requirement for a large training set, and slow learning. Most of these features do not occur in biological systems, thus it would be beneficial to take an inspiration from them to help training artificial systems. The aim of the project is to analyze

	<p>high-level behaviors of biological neural systems and to build innovative artificial models by proposing new paradigms of learning and new architectures of computational models.</p> <p>The Jagiellonian University run six research groups: Cognitive group, Physics-group, Machine-learning group, Neuro-group, BioDataScience-group, InfoTech-group.</p> <p>We seek for a Student of the InfoTech group.</p>
Key responsibilities include:	<p>The responsibility of the potential contractor shall be:</p> <ol style="list-style-type: none"> 1. designing, implementing, testing, maintaining, and documenting software created for the project and used as part of the project, 2. cooperation in the dissemination of project results, including assistance in the preparation of presentations and publications.
Profile of candidates/requirements:	<ol style="list-style-type: none"> 1. At the time of commencement of receiving the scholarship, the selected person is a student of science (in computer science or mathematics), 2. basic knowledge in the field of computer science, in particular in the field of artificial intelligence and machine learning, 3. experience with machine learning software libraries (TensorFlow, PyTorch, Keras or similar). 4. fluency in Python (C/C++ is a plus) 5. experience in research work, 6. good knowledge of English
Required documents:	<ol style="list-style-type: none"> 1. filled in recruitment form (basic formal information); 2. curriculum vitae; 3. list of publications and ongoing research projects; 4. statement on the knowledge and acceptance of rules regarding intellectual property and legal protection of intellectual property; 5. documents confirming the status of the Student (will be required when signing the contract); 6. information about the processing of personal data. See bionn.matinf.uj.edu.pl in the "Job offers" section.
We offer:	<ol style="list-style-type: none"> 1. cooperation with the best machine learning groups in Poland; 2. scholarship in the amount of PLN 1500; 3. possibility to cover the costs of participation in conferences and workshops; 4. access to computing infrastructure.
Please submit the documents to:	bionn@matinf.uj.edu.pl
Application deadline:	22 February 2023 (12 PM CEST)

<p>General rules of the requirement process</p>	<ol style="list-style-type: none"> 1. An interview is expected. The Recruitment Committee (RC) reserves the right to invite for the interview only pre-selected candidates. We expect that the interview will be held on 28 February 2023. The confirmation will be sent to the prospective candidates on the 24th of February. 2. The decision will be taken by RC established at the Faculty of Mathematics and Computer Science of Jagiellonian University on 28th February 2023. 3. The final decision must be approved by Foundation for Polish Science. 4. RC reserves the right to close the competition without selecting the candidate. 5. In the case of the resignation of a candidate recommended for the position of a Student, or failure to receive the Foundation for Polish Science's approval, RC may ask to publish a new call for the position. 6. The results of the recruitment procedure may be appealed by the candidates (who had the interview) within the period of one week after obtaining information about the decision RC.
<p>For more details about the position please visit</p>	<p style="text-align: center;">bionn.matinf.uj.edu.pl</p>
<p>Euraxess job/stipend offer (in case of PhD and postdoc positions):</p>	<p style="text-align: center;">not applicable</p>

Due to the entry into force of Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016, we also require that by applying, a candidate expresses his/her consent to the processing of his/her personal data needed for the recruitment process by the Jagiellonian University.