

POSTDOC CALL IN DATA SCIENCE, MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE

We need to incorporate one researcher from the areas of computer science, engineering science or mathematics interested in **pursuing postdoctoral studies** about Machine Learning and automated decision systems and in performing both theoretical and practical work on the topics of fairness, accountability, transparency and explainability.¹ They would join a multidisciplinary team for a period of up to 2 years. Access to working with Chilean public organizations that will develop data science and/or artificial intelligence systems is offered.

The postdoctoral research will be conducted as part of the project “Market Opportunities for Technology Companies – Public Procurement of Accountable, Ethical and Transparent Algorithms”. For more information about the project, visit <https://goblab.uai.cl/algoritmos-eticos/> and <https://www.iadb.org/en/project/CH-T1246>

BENEFITS

The person selected will receive a monthly gross compensation of \$2,000,000 Chilean pesos for 20 months. A postdoctoral contract will be drafted for the researcher who is awarded the tender. The work will be performed in a remote or semi-remote manner depending on the health conditions. Once it is possible to return to on-site work, the researcher is expected to be able to attend the Peñalolén Campus in Santiago at least twice a week.

Settling expenses and others: The selected researcher will be able to access an amount of up to \$3,200,000 pesos to cover the costs of traveling to Chile or within Chile to Santiago. This considers transportation, traveling expenses and airline tickets in economy class. The balance not used for these purposes may be used for operating expenses. These expenses must be properly justified.

Additionally, they will join a multidisciplinary research group in data ethics coordinated by GobLab UAI, where the project’s researchers participate, composed of professionals from disciplines such as philosophy, law and public administration.

RESEARCHER REQUIREMENTS:

- A completed PhD in computer science, informatics, data science, engineering, etc.
- Proven research experience in the form of peer-reviewed publications or conference articles, etc.
- Experience and ability to work in an interdisciplinary research team.
- Experience in research design and implementation, including experimental and/or quantitative methods.
- Excellent writing and audience interaction skills, both technical and diverse professional

¹ <https://facctconference.org/> , <https://www.aies-conference.com/2021/>

audiences.

- Abilities and experience in public speaking to a wide range of audiences, and in drafting practical material, documentation and reports related to the project's objectives.

BACKGROUND INFORMATION

Universidad Adolfo Ibáñez (UAI) is a private, non-profit institution constituted as such in 1988. It stems from the Valparaíso School of Business established in 1953 by Fundación Adolfo Ibáñez, custodian of the legacy of the entrepreneur and public man Adolfo Ibáñez Boggiano. In 2019, the University incorporated a total of 7,661 undergraduate students, who are pursuing 12 different degrees, as well as 3,365 graduate students distributed over 50 master's programs and 7 doctorate programs. The University currently has three campuses in the country.

Since December 2020, Universidad Adolfo Ibáñez (www.uai.cl) has been executing the project "Market Opportunities for Technology Companies – Public Procurement of Accountable, Ethical and Transparent Algorithms" in partnership with ChileCompra, the Digital Government Division, the Ministry of Science, Technology, Innovation and Knowledge, and the business accelerator Magical, with the support of IDB Lab.

The participants in the execution of this project are the School of Government through its public innovation laboratory GobLab, the Faculty of Engineering and Science, the Faculty of Liberal Arts and the School of Communications and Journalism.

The initiative is part of fAIr LAC, launched by the IDB Group in 2019, which seeks to promote the ethical and responsible application of artificial intelligence in Latin America, helping the public and private sector to improve the provision of social services and the development of social impact companies.

Specifically, the project will focus on the following areas:

1. Testing of practical guidelines for acquiring accountable and ethical automated decision systems (ADS) in the State of Chile.
2. Design and practical implementation of the existing standards for ethical data management, which will be piloted in two public agencies that will acquire automated decision systems in areas that pose ethical challenges. The researcher will have **access to the data** for training and assessing these systems.
3. Generation of capabilities for the various actors involved in the design, procurement, development and implementation of algorithm-based decision-making systems, especially the developers of smaller-sized technology and the public officials in charge of implementing the procurement processes.
4. Development of knowledge products that will be widely shared through policy documents and public events.

SUPERVISION

The postdoctoral research will be supervised by Gonzalo Ruz, professor at the Faculty of Engineering and Science, staff member of the Doctorate in Complex Engineering Systems and Director of Research and Innovation at the Faculty.

The director of the project “Market Opportunities for Technology Companies – Public Procurement of Accountable, Ethical and Transparent Algorithms” is María Paz Hermosilla, GobLab Director.

Restrictions and Obligations

1. Participating in the project’s activities:
 - a. Participating in the project’s monthly coordination and governance activities and its operational activities, such as drafting and reviewing technical documentation, knowledge products and generating the required reports.
 - b. Participating and designing training and dissemination activities for the public and private sector.
 - c. Participating in the support that UAI will provide to public bodies that will develop automated decision-making systems with external suppliers, and in the preparation and deployment of the ethical pilot plan for the two systems.
 - d. Supervising 1-2 master’s theses.
2. The position of postdoctoral researcher is full-time. Nonetheless, up to 8 weekly hours may be devoted to other academic or research activities not related to the project.
3. A foreign postdoctoral researcher is obligated to get a temporary work visa in Chile. UAI will provide the candidate with an invitation letter addressed to the corresponding Chilean consul to initiate the visa process. It is recommended that the candidate start this process at least 3 months before arriving to the country. Once in Chile, the candidate must sign the respective contract, and they will be provided with information to obtain an identity card and initiate activities with the Internal Revenue Service.
4. Any additional expense by way of medical insurance or others shall be paid by the postdoctoral researcher.
5. The selected person is expected to carry out their research based on the project’s themes and with the participant public entities and private companies.
6. At least one publication in a journal indexed by Web of Science is expected in which both the postdoctoral researcher and the supervising professor are named as lead authors, and whose acknowledgements recognize the contribution to the article made by FIC, the School of Government and IDB.

APPLICATION REQUIREMENTS:

- The candidate must fill out the application form (in the annex), which includes a cover letter describing the benefit and contribution of the candidate's incorporation into the project, and the research lines they would like to develop.
- Send a CV, along with a letter of interest to goblab@uai.cl
- Send a published article.

EVALUATION AND AWARDING:

Applications that meet the established requirements will be evaluated by a committee formed by representatives of the School of Government and the Faculty of Engineering and Science, to which end they will use the following criteria:

EVALUATION CRITERIA

Formulation of the research activity: The quality of the proposal, its fit to the state of the art, the consistency among the proposed objectives, the activities to be carried out, the work plan, the results, the proposed methodology and the innovation will be evaluated.	50%
Academic track record of the applicant: The applicant's productivity and their professional information are considered, as well as their contribution to society.	30%
Personal interview: Evaluation of cross-cutting competencies for teamwork, communication, and flexibility and diversity.	20%

The following scale will be used to rate each criterion:

Score	Description
EXCELLENT – 5 points	The application meets/addressed all the relevant aspects of the required profile in an outstanding manner. Any weakness is quite minor.
VERY GOOD – 4 to 4.9 points	The application meets/addressed the aspects of the required profile in a very good manner, even when certain improvements are possible.

GOOD – 3 to 3.9 points	The application correctly meets/addresses the aspects of the required profile, although it requires certain improvements.
REGULAR – 2 to 2.9 points	The application meets/addresses the aspects of the required profile in general terms, but there are important weaknesses.
INSUFFICIENT – 1 to 1.9 points	The application does not properly meet/address the aspects of the required profile or there are serious inherent weaknesses.
DOES NOT QUALIFY – 0 to 0.9 points	The application does not meet/address the required profile or cannot be evaluated due to a lack of records or information.

Once the evaluation stage is completed, the committee will propose a list of selected candidates, which will be reviewed and approved by the Dean of FIC and the Dean of the School of Government.

APPLICATION AND DELIVERY OF BACKGROUND DOCUMENTS

The deadline for submitting the application is **September 20th, 2021**, at 12:00 Chile time. The required information must be sent electronically to goblab@uai.cl

Questions by email to Pamela Urrea at pamela.urrea@uai.cl

APPLICATION RESULTS AND START OF DUTIES

Application results reporting date: **September 30th, 2021**.

Desirable date to begin work: October 2021, to be agreed with the selected applicant. If an applicant residing abroad is selected, they may start remotely while the administrative procedures to move to the country are performed. In case an applicant living outside of Santiago is selected, they may start remotely while they make adjustments for their transfer.

ANNEX

Application Form

Call for postdoctoral project

“Market Opportunities for Technology Companies – Public Procurement of Accountable, Ethical and Transparent Algorithms”

Applicant Researcher’s Name:

Cover letter: Letter of interest/cover letter describing the benefit and contribution of their incorporation into the project, as well as the research lines they would like to develop (the maximum letter length is 1 page).

RESEARCH PROPOSAL

The selected person is expected to carry out their research based on the project's themes and with the participant public entities and private companies. For detailed information about the project, visit the following link: <https://www.iadb.org/en/project/CH-T1246>

- PROJECT TITLE

- **SUMMARY:** Describe the main issues you plan to address, including the objectives, the methodology and expected results. **The maximum length for this section is 1 page** (use Arial, font size 10).

- **RESEARCH PROPOSAL:** This section is a general presentation of the problem that will be researched, including the problem to be addressed, work hypothesis, goals and associated methodologies (if applicable, include the experimental design), as well as the relevant theoretical information. **The maximum length for this section is 4 pages** (use Arial, size 10).

- **WORK PLAN:** Based on your established objectives, indicate the stages and describe the activities to be conducted in terms of the duration of the proposal. **The maximum length for this section is 1 page** (use Arial, font size 10). If appropriate, use a Gantt chart.

- **DOCTORAL THESIS ABSTRACT:** Maximum length for this is ½ page (use Arial, font size 10).

- ACADEMIC TRACK RECORD OF THE APPLICANT:

Please attach an updated CV that includes your publications, and professional and work information, as well as your activities to contribute to society.