

Faculty Position in Automation, Artificial Intelligence, and DataScience in Technology and Industry

The **School of Engineering** at the **Pontificia Universidad Católica de Chile**, one of the leading engineering academic institutions in Latin America and ranked among the top four emerging leaders for engineering education worldwide, invites outstanding candidates for a full-time faculty position in the area of automation, artificial intelligence, and data science in technology and industry.

Duties: High-quality teaching (at undergraduate and graduate levels), and conducting independent research. Additional duties include knowledge transfer, outreach, and university administrative tasks. The new position should conduct teaching, research, and technological innovation activities in any area related to artificial intelligence, and/or data science as well as one or more of the following technological or industrial topics:

- **Data Science and Artificial Intelligence in Mining Engineering**, including applications in ore processing, transportation, open pit development, underground mining, mine planning and mineral economy.
- **Cryptocurrencies and New Financial Technologies**, with focus on cryptocurrencies and blockchain applications for finance, fintech, and related areas.
- **Data-driven engineering of biological systems**, including, but not limited, to analysis of big 'omics' data (genomics, proteomics, metabolomics, fenomics, among others), modeling of biological networks (e.g., metabolic and transcriptional regulatory networks), protein engineering (e.g., folding and structure prediction), molecular dynamics simulation, chemoinformatics, drug design, among others.
- **Cybersecurity**, including but not limited to cryptography, privacy, and data protection, software security, blockchain, computer forensics, smart contracts, data integrity, and their intersection with data science or artificial intelligence.
- **Health Data Science**, with a focus on understanding the causes and effects of diseases, predicting their behavior, and understanding people's health behaviors, among others.
- **Generative models for content creation**, including domains such as automatic generation of music, speech, images, video, or text using state-of-the-art generative deep learning-based architectures such as VAEs, GANs, Flow, and Diffusion-based models.
- **Analytical Social Sciences**, including, but not limited, to topics like the use of social networks data, and other sources, to assess opinions, society trends in important topics, design and analysis of voting systems, in the context of a "digital democracy". Also considered are topics related to the analysis of social choice in different contexts, with the support of game theoretical models, and the like.
- **Interaction Design**, including domains, such as mobile interaction, interactive surfaces, social computing, ubiquitous computing, human-centered design, collaborative technologies, and affective computing.

The selected candidate is expected to develop a strong externally funded research program, support doctoral programs, and teach three courses per year, two of these courses have to belong to the data science program taught by the computer science department, and another course according to their expertise in the previously mentioned topics.

Requirements: Applicants must hold a Ph.D., preferably in Computer Science, Artificial Intelligence, Data Science, and/or have demonstrable expertise in these fields. Due to the nature of our School, the applicant will have the opportunity and should be willing to work collaboratively with other Departments in the School of Engineering. Previous postdoctoral or international academic experience should be stated in the application.

Candidates do not need to be fluent in Spanish at the time of application, but should be prepared to learn the language well enough to teach in this language in the short term (two years maximum). English is a requirement.

Applicants must demonstrate a strong commitment to all aspects of academic life and the public good of the institution. They must be highly motivated to continuously improve their teaching skills, have a genuine interest in getting involved with our graduate programs (specially the doctoral program), and be able to develop and maintain an active research agenda leading to high-quality publications, securing research grants, generating and participating in interdisciplinary projects, leading scientific and industry-liaison initiatives, strengthening and creating national and international academic networks, etc. The candidate will also be expected to create new undergraduate and graduate courses and teach traditional courses in related areas.

Application Instructions

Applicants should submit the following documents to vacantes-academicas@ing.puc.cl (in the email subject line, please indicate: **Faculty position in Automation, Artificial Intelligence, and DataScience in Technology and Industry**; see [note A](#)) by **(a definir por el consejo) 2022** (late applications will be considered until the position is filled).

1. A research statement (in English) indicating the immediate and long-term goals of the applicant's research plan and detailing potential collaboration networks with other researchers and plans for interactions with scientists in Chile and other countries.
2. A teaching statement of purpose (in English) indicating why the applicant should be considered for the position and the plans for teaching. The applicant should be as specific as possible by providing examples of the plan to transfer knowledge to undergraduate and graduate students.
3. An updated curriculum vitae (in English, see [note B](#)).
4. If available, copies of five recent Web of Science publications that are relevant to the context of the application (see [note C](#)).

5. At least, three letters of recommendation, which must be e-mailed directly by the signatories to vacantes-academicas@ing.puc.cl.

Note A:

The applicant will get a response from this email address confirming that the documents have been received.

Note B:

The CV must be organized as follows:

- i. Personal information: name, address, contact telephone number (with country and city codes), email address, web page (if any).
- ii. Education: all academic and professional degrees, indicating the granting institutions and dates. If the applicant is currently enrolled in a doctoral program, please indicate the expected date for the degree.
- iii. Educational experience (university or institution, courses taught and years).
- iv. Professional experience (employer, duties, years).
- v. Research:
 - a. List of Web of Science journal publications (see [note C](#)).
 - b. List of other publications such as reports, books or book chapters, conferences attended, research projects participated in, patents, etc.
- vi. Other: awards, computer skills, languages, and any other relevant background information.

Note C:

Please avoid padding the list with other publications, such as those published in journals not indexed in the Web of Science database, conference presentations and alike.

Once the complete set of application materials has been received, the applicant will be contacted within two months and informed whether the application has been accepted for further consideration. If this initial screening is successful, the candidate will be asked to continue the process following the steps described in **Appendix 1**.

Further information

Additional information can be obtained by emailing to vacantes-academicas@ing.puc.cl

EEO/AAP Policy Statement

The Pontificia Universidad Católica de Chile is committed to fostering an environment that welcomes and embraces diversity, and does not discriminate on the basis of race, color, creed, religion, origin, disability, age, sexual orientation, or marital status in its activities, including employment, admissions, and educational programs.

Other Chilean and University employment benefits may be found in:

- Foreign workers in Chile: <https://www.dt.gob.cl/portal/1626/w3-article-93693.html>
- Labor laws in Chile: <https://www.thisischile.cl/labor-laws-in-chile/?lang=en> --- Este sitio parece que ya no existe, será que quieren agregar: <https://marcachile.cl/en/knowledge-science/> y/o <https://www.bizlatinhub.com/employment-law-chile/>
- University rules and regulations: http://direcciondedesarrolloacademico.uc.cl/index.php?option=com_content&view=article&id=286&Itemid=178

All members of the Pontificia Universidad Católica de Chile subscribe the Code of Ethics that can be found in <https://www.uc.cl/codigodehonor>

Appendix 1. Application steps

- 1) Interviews/Presentation (Lecturer):
 - a. Interview with the Dean of the School of Engineering
 - b. Interview with the Dean of the Faculty of YY (en caso de ser compartida)
 - c. Interview with faculty members and the Head of the Department of ZZ
 - d. Interview with faculty members of the Faculty of YY (en caso de ser compartida)
 - e. Interview with the Search Committee
 - f. Interview with the Technical Committee (en caso de ser compartida)
 - g. Psychological Interview
 - h. Presentation (Lecturer) (open to faculty members of the School of Engineering and the Faculty of YY and graduated student invited)

These interviews and presentation are generally carried out within a week.

- 2) Selection of the final candidate by the Department and the Search Committee
- 3) Approval the candidate by the School Council
- 4) The successful candidate is informed (offer letter)

The time that elapses from the interviews until the final resolution is around two months.