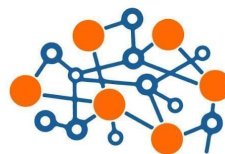




UNIVERSIDADE  
FEDERAL DO CEARÁ



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CENTRO DE REFERÊNCIA  
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## ANNOUNCEMENT No. 002/2023

### POSTDOCTORAL FELLOWSHIP SELECTION FOR THE ARTIFICIAL INTELLIGENCE REFERENCE CENTER - CEREIA

The Reference Center for Artificial Intelligence (CEREIA), a Research Center based at Federal University of Ceará, funded by Hapvida Notredame Intermédica Group and São Paulo Research Foundation, is offering a set of postdoctoral fellowships in Artificial Intelligence.

This program offers an exciting opportunity for early-career researchers to advance their academic and research careers in the dynamic field of AI. CEREIA is committed to promoting excellence in AI research, with specific focus on addressing healthcare-related problems and challenges. The Center conducts several projects, including prediction of chronic diseases; engagement of patients in health promotion and chronic disease prevention programs; intelligent systems for remote patient monitoring; analysis and processing of medical images; medical history assisted by artificial intelligence; and others.

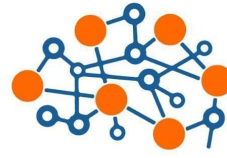
Brazilian and foreign researchers who have obtained a doctoral degree less than 7 (seven) years ago, either in the country or abroad, with outstanding performance in a research area related to the scholarship activities, may apply. The position is a one-year contract funded by the São Paulo Research Foundation (FAPESP). The fellowship may be extended for an additional year, depending on performance and availability of funds.

This announcement provides comprehensive details on eligibility criteria and application procedures associated with the fellowship.

#### Available Positions

<b>Postdoc Position: Engagement of Patients in Health Promotion and Chronic Disease Prevention Programs</b>	
<b>Ref.</b> PDA1C1 - Postdoctoral "ChronicsConversationalAgent.Ai"	
<b>Research Theme Area:</b> Neural Networks / Natural Language Processing	
<b>Partner Institution:</b> University of Fortaleza (Unifor) <b>Department:</b> Postgraduate Program in Applied Informatics <b>Supervisor:</b> João José Vasco Peixoto Furtado	<b>Type:</b> Postdoctoral Fellowship <b>Period:</b> 40 hours/week <b>Duration:</b> 12 months





### Position Details

The selected candidate will contribute to the development of conversational agents based on natural language models. These agents will be designed to support self-care for patients with chronic hypertension and diabetes.

The scholarship holder will undertake the following activities:

- Study and formulate theoretical methods and algorithms for artificial neural networks with a specific focus on natural language processing.
- Develop novel methodologies that involve the integration of time series analysis and artificial neural networks.
- Create automated systems based on the newly developed methodologies for interdisciplinary applications in various thematic project areas such as medicine, physics, chemistry, biology, computer science, and more.

### Candidate profile

Candidates for this position should have the following qualifications:

- Experience in Computer Vision, Neural Networks, and Markov Chains;
- Exceptional academic and scientific performance, including publications in recognized, high-quality scientific venues such as indexed international journals or conferences. Specifically, candidates should have at least one publication in the field of artificial neural networks, one publication demonstrating expertise in Markov chains and one publication demonstrating practical knowledge in time series forecasting.
- International collaboration experience, including collaboration with researchers both in Brazil and abroad, is highly desirable.
- Proficiency in English: the ability to communicate effectively, both orally and in writing, in English.

In addition to these qualifications, candidates should have completed a doctoral degree in a related research area no more than seven years before the start of the PD fellowship.

More information about the candidates' requirements should be checked at: <https://fapesp.br/en/postdoc>

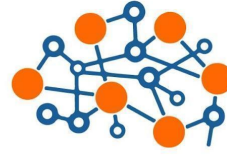
### Postdoc Position: Intelligent Systems for Remote Patient Monitoring

**Ref.** PDA1C2 - Postdoctoral "RemotePatientMonitoring.Ai"

**Research Theme Area:** Machine Learning for Distributed Embedded Systems

**Partner Institution:** Federal University of Ceará (UFC)  
**Department:** Postgraduate Program in Teleinformatics Engineering  
**Supervisor:** Guilherme de Alencar Barreto

**Type:** Postdoctoral Fellowship  
**Period:** 40 hours/week  
**Duration:** 12 months



**Position Details**

The selected candidate will undertake the following activities:

- Develop a distributed systems architecture based on cloud computing and edge computing principles;
- Develop new deep learning methodologies for detecting anomalies in signals and images;
- Insert signal/image anomaly detection methodologies into the distributed systems architecture developed using federated learning.

**Candidate profile**

Candidates for this position should have the following qualifications:

- Proven experience in areas of interest to the project, mainly in pattern recognition, machine learning, internet of things (IoT), cloud computing, edge computing and embedded systems;
- Outstanding academic and scientific performance, with high-impact publications in vehicles of recognized quality – international journals indexed in the project themes.
- International collaboration experience, including collaboration with researchers both in Brazil and abroad, is highly desirable.
- Proficiency in English: the ability to communicate effectively, both orally and in writing, in English.

In addition to these qualifications, candidates should have completed a doctoral degree in a related research area no more than seven years before the start of the PD fellowship.

More information about the candidates' requirements should be checked at: <https://fapesp.br/en/postdoc>

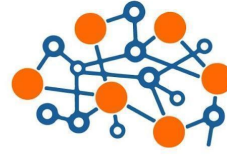
**Postdoc Position: High Quality Interfaces for Data Science**

**Ref.** PDA1C3 - Postdoctoral "ResearchAndDevelopmentCandidates.Ai"

**Research Theme Area:** Data Science / Artificial Intelligence

**Partner Institution:** Federal University of Piauí (UFPI)  
**Department:** Computing Department  
**Supervisor:** Ricardo de Andrade Lira Rabelo

**Type:** Postdoctoral Fellowship  
**Period:** 40 hours/week  
**Duration:** 12 months



### Position Details

The selected candidate will contribute to increasing the number of participants in clinical research by developing a recommendation system. This system will assist healthcare practitioners in identifying eligible patients for real-time inclusion in clinical studies using medical record data.

The scholarship holder will undertake the following activities:

- Develop scripts to automate the collection of clinical research data through APIs for exploratory data analysis and model building;
- Build a database with annotated medical data that has semantic classes and relationships between classes in order to train and test machine learning models;
- Evaluate and adjust structured and unstructured data extraction models in clinical texts;
- Achieve high-precision models to identify patients who are eligible to participate in ongoing clinical studies;
- Build a clinical study recommendation system based on user experience practices;
- Define a strategy for continuous system testing to understand the points for improvement and guide changes for system releases.

### Candidate profile

Candidates for this position should have the following qualifications:

- Proven experience in areas of interest to the project, mainly in natural language processing, machine learning, data science, statistics, optimization, and
- Outstanding academic and scientific performance, with high-impact publications in vehicles of recognized quality – international journals indexed in the project themes.
- International collaboration experience, including collaboration with researchers both in Brazil and abroad, is highly desirable.
- Proficiency in English: the ability to communicate effectively, both orally and in writing, in English.

In addition to these qualifications, candidates should have completed a doctoral degree in a related research area no more than seven years before the start of the PD fellowship.

More information about the candidates' requirements should be checked at: <https://fapesp.br/en/postdoc>

### Notes

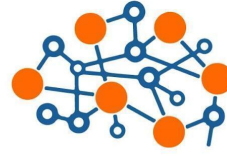
The stipend for the FAPESP post-doctoral fellowship is R\$ 9,047.40 per month.

Being a scholarship holder does not establish an employment relationship with UFC, FAPESP, or any of the partner institutions.

The candidate must be available for full dedication to research, except under conditions



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outlined in [Resolution PR N° 13/2009](#), dated July 15, 2009.

The approved scholarship holder must comply with FAPESP regulations throughout the duration of the scholarship. Requirements should be checked at <https://fapesp.br/en/postdoc>

If none of the proposals meet the criteria described above, scholarships will not be granted in this selection process.

If you have any questions, please contact [diretoria.cria@ufc.br](mailto:diretoria.cria@ufc.br).

## Application Procedures

Candidates must submit the Application Form, highlighting their motivation to assume one of the available positions, and including a CV.

Fill-in the application form: [Application Form](#)

Deadline: **November 30th, 2023**