



# INTERNSHIP OFFER

## BR-2025-79-CEF

Leopoldina - MG, Brazil

ON-SITE

### INTERNSHIP HOST

Name of Company  
CEFET-MG / (Leopoldina)

Website

Address of Company  
Leopoldina-MG  
Brazil

Number of Employees  
500

Business or Product  
University

### STUDENT REQUIRED

General Discipline  
Computer Science /  
Informatics; Computer  
Software/Hardware  
Engineering

Field of Study  
General; General

Completed Years of Study  
1

Language Required  
English Good (B1, B2) Or  
Spanish Good (B1, B2)

Required Qualifications and Skills  
Programming  
Knowledge of programming and data  
structures is required. Knowledge of  
artificial intelligence is desirable

Student Status Requirements  
During the whole period of the internship

Other Requirements/Information

### INTERNSHIP OFFER

12 - 12  
weeks

920 BRL  
per Month

700 BRL  
per Month

Latest Possible Start Date

Within Months  
Apr-2025 - Nov-2025

Company Closed Within  
-

Deductions Expected  
0

Payment Method  
Other

Arranged by  
IAESTE Brazil

Estimated Cost of Living including Lodging  
920 BRL / Month

Working Environment: Field work

Working Hours / Week: 20.0

Artificial Intelligence (AI) has evolved rapidly over recent decades, proving to be a field of research and application with revolutionary potential in various areas of society. One of the most promising approaches in AI is reinforcement learning, which relies on autonomous agent systems that learn to make decisions based on rewards received for their actions. This approach has attracted considerable attention in games as it challenges AI to improve its strategic and decision-making skills. The project aims to research and develop AI agents capable of competing in games with human-level or superior performance. The project involves exploring various machine learning techniques, from traditional algorithms to deep neural networks, within simulation environments that represent real-game scenarios.

**Practical Interaction:** Students involved in the project will not only learn theory, but will also directly apply their knowledge to developing AI systems for games. This hands-on experience will bring them face-to-face with real-world problems, preparing them to tackle complex career challenges.

**Interdisciplinary Applications:** The knowledge and techniques developed in the project can be applied in various fields, including robotics, automation, data analysis, and more. This broadens the project's contributions beyond gaming, benefiting other areas of research and development.

The project has the following objectives:

- Development of Competent Autonomous Agents: Train AI agents to compete in games with performance comparable to or better than that of human players.
- Exploration of Machine Learning Techniques: Evaluate and compare machine learning techniques, from classic algorithms to deep neural networks.
- Adaptation to Different Game Genres: Develop flexible and generalist AI agents capable of playing across multiple game genres.
- Performance Evaluation: Use relevant metrics to assess AI agents' quality and strategic abilities.
- Practical Application in Real Games: Test the viability of applying these models in real-world scenarios, competing against human players.
- Integration into Education: Create courses and educational materials for AI and reinforcement learning for undergraduate and graduate training.
- Knowledge Dissemination: Share results and insights through academic publications and conference participation.

- Interdisciplinary Collaboration: Encourage collaboration across various academic areas, creating an interdisciplinary environment.
- Contribution to the Academic and Industrial Community: Apply project results to fields beyond gaming, such as robotics, automation, and data analysis.
- Creation of Future Research Opportunities: Lay the foundation for future research in AI, reinforcement learning, and practical applications.

These objectives combine advanced AI research with practical application, student training, interdisciplinary collaboration, and contributions to academic and industrial communities.

### ADDITIONAL INFORMATION

## ADDITIONAL INFORMATION

Dear student,

Send in your application the below information, it is mandatory:

a) ABOUT YOUR UNIVERSITY, WE NEED:

Name:

Address:

Zip Code: City: State/Province:

Telephone:

Contact person: (Name and position)

E-mail of contact person:

b) YOUR PARENTS NAME

Parent 1:

Parent 2:

Thank you very much!

**Deadline for Nomination - 31-Mar-2025**

Date - 26-Jan-2025

On Behalf of Receiving Country - IAESTE Brazil