

Joao Pires Henares

Game Development, AI and VFX

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EDUCATION

University of Notre Dame

Bachelor of Science
Computer Science

Notre Dame, IN

Graduated December 2024

GPA: 3.82 | Honors: 4 times Dean's List nominee

EXPERIENCE

BTG Pactual

Software Engineering Intern

São Paulo, Brazil

Summer 2024

- Full stack development of new functionalities using Typescript and React. Created an AI that extracts data from a complex format of document. Automated work previously performed manually. Expanded practice with clean code, clean architectures and AWS services.

BTG Pactual

Software Engineering Intern

São Paulo, Brazil

Summer 2023

- Refactored website endpoints. Used a goolang backend extensively to restructure and create new functions. Performed React front-end to update and create new visuals. Used clean code, clean architecture, AWS services and git.

ACTIVITIES

Neural Networks and AI

Fall 2023 – Spring 2024

- Created a convolutional neural network that guesses hand signs based on its training on videos.
- Created a neural network that played the game Doom. It could aim and walk on given scenarios.
- Currently performing research on reducing the number of precision bits required to recognize faces.

Game Development and Visual Effects

Fall 2023 – Present

- Created parts of a Godot game integrated with a custom built server. The game was based on creating, playing, sharing and connecting levels between users.
- *Nughi*: Currently creating a souls-like game using Unity. Check more in this [link](#).
- Got prized in a mini game jam at MIT and in Notre Dame.
- 3D VFX project: worked on rigging and animating Woody from Toy Story in Andy's room.
- 3D VFX project: worked on a dynamic animation using bricks and a lego doll.

Full Stack Web Development

Spring 2022 – Spring 2024

- Created two websites with a custom front-end using HTML/CSS/JS. Back-end uses Python with Flask.
- Created two websites with ReactJS and ReactTS. Both interfaced with databases.

Operating Systems

Fall 2023

- Created parts of an OS – terminal, file system, syscalls, thread implementation

SKILLS

Game Engines and concepts: Unity and Godot. OOP. 3D and 2D games. Shader programming.

VFX: Modeling, texture painting, rigging, animation, maya scripting, MoCap, dynamic animation.

Programming Languages and Paradigms: Especially proficient in Python, C, C++, C# and GoLang. Proficient in API use and creation, design patterns, multithreading, neural networks, databases.

Languages: Portuguese (native), English (fluent), Spanish (advanced), German (intermediary).