Caio Brito

Montreal - Canada (Permanent Resident)

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Education

University of Montreal	*Montreal,CA*
PHD STUDENT IN COMPUTER SCIENCE	*2019 - present*

- Advisor: Pierre Poulin and Veronica Teichrieb (Federal University of Pernambuco)

Center of Informatics of the Federal University of Pernambuco - CIn/UFPE	*Recife, Brazil*
MASTER'S STUDENT IN COMPUTER SCIENCE	*2016 - 2018*

- Advisor: Veronica Teichrieb

Center of Informatics of the Federal University of Pernambuco - CIn/UFPE	*Recife, Brazil*
BACHELOR'S DEGREE IN COMPUTER SCIENCE	*2010 - 2016*

- Advisor: Veronica Teichrieb

Research and Development Project

Google Summer of Code 2023 - BRL-CAD	*Montreal, Canada*
GOOGLE SUMMER OF CODE CONTRIBUTOR	*05/2023 - 10/2023*

- Created a new entity for volumetric data (VDB) into BRL-CAD. Additionally, the VDB structure was be used to render volumetric data with ray tracing.
- More details on https://summerofcode.withgoogle.com/programs/2023/projects/X9kIPCbP
- C++, OpenVDB

Disney Research	*Los Angeles, US*
INTERN	*07/2018 - 09/2018*

- Researched and developed on the subject of face tracking.
- C++, Unity and OpenCV
- Coordinator: Kenny Mitchell

Samsung / Voxar Labs	*Recife, Brazil*
RESEARCHER	*07/2017 - 07/2018*

- Researched and developed on the subject of camera manipulation and object tracking.
- Supervised a graduation student.
- C++ and OpenCV

SimplifiqueGP / Voxar Labs	*Recife, Brazil*
DEVELOPER	*01/2017 - 06/2017*

- Developed a multiplatform 3D rendering solution for engineering purpose.
- C++, Unity

HP / Voxar Labs	*Recife, Brazil*
RESEARCHER	*09/2015 - 12/2016*

- Researched on the 3D printing subject.

LG / Voxar Labs	*Recife, Brazil*
RESEARCHER / DEVELOPER	*04/2015 - 08/2015*

- Developed a mobile augmented reality application for Android.
- C++ and OpenCV

Brazilian Navy / Voxar Labs   *Recife, Brazil*

Researcher / Developer   *01/2015 - 03/2015*

- Developed a parallel particle-based fluid simulation using SPH method and a fluid rendering solution using local illumination.
- C++, CUDA, OpenMP, OpenGL

Programming skills

Languages

C++, Python, C#

Libraries and tools

CUDA, Unity, Optix, OpenGL, OpenCV, LaTeX, Git, Visual Studio, Microsoft Office

Languages

English

Fluent

French

Intermediate

Portuguese

Native

Publications

[1] **Voxel-based Representations for Improved Filtered Appearance**. Brito, Caio; Poulin, Pierre; Teichrieb, Veronica. *High-Performance Graphics (HPG)*. 2023.

[2] **Recycling a Landmark Dataset for Real-time Facial Capture and Animation with Low Cost HMD Integrated Cameras**. Brito, Caio; Mitchell, Kenny. *Iternational Conference on Virtual Reality Continuum and Its Applications in Industry (VRCAI)*. 2019.

[3] **Ray Tracer Based Rendering Solution for Large Scale Fluid Rendering**. Brito, Caio; e Silva, André L. Vieira; Teixeira, João Marcelo; Teichrieb, Veronica. *Computers & Graphics*. 2018.

[4] **Large Viscoelastic Fluid Simulation on GPU**. Brito, Caio; e Silva, André L. Vieira; William, Mozart; Teixeira, João Marcelo; Teichrieb, Veronica. *SBGames - Computing Track*. 2017.

[5] **Screen Space Rendering Solution for Multiphase SPH Simulation**. Brito, Caio; William, Mozart;e Silva, André L. Vieira; Teixeira, João Marcelo; Teichrieb, Veronica. *Symposium on Virtual and Augmented Reality (SVR)*. 2017.

[6] **Towards Automatic Evaluation of Personality Tests**. Brito, Caio; Teixeira, João Marcelo; Teichrieb, Veronica. *Workshop de Realidade Virtual e Aumentada (WRVA)*. 2015.