

Fábio Aguiar

Computer Engineer



1995, August, 05



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About me

I am someone whose determination comes from the pleasure of trying to solve new problems all the time. I believe progress can come from chaos and that computer engineering during the next century will be all about the communication needed to solve problems through properties of Emergence in complex systems, through very simple communicative processing modules with reduced and invisible processing.

Skills

C,C++

Python

C#

Java

Unity

AWS

NoSQL

Postgres

Git

Current Interests

Data Science

Data Analytics

Game Development

VR Development

Nanoservice Architectures

Gen AI apps

Education

2014-2020: Bachelor in computer engineering

Polytechnic School of Engineering, University of São Paulo

College degree

Qualification

- Proficiency with AWS Cloudformation generation.
- C, C++, as the basic imperative languages. C# as a supporter, when required.
- Python as the basic object-oriented language for modular programming, parallelism, prototyping, Artificial Intelligence and Data Science.
- Experience with Docker, container and unit testing.
- Project management exclusively through Github for code, visual tools for business.
- Worked with OpenCV, Opengl, Shaders for image processing and matrix GPU calculations, image processing for real life interpretation with YOLO, Pytorch and Tensorflow.
- Used MySQL, PostgreSQL, Azure Devops and AWS, VHDL and Assembly.
- Created a deployment pipeline with automated testing, Datadog and Sonar integration for deploying AWS Lambdas with efficient integration, from scratch.
- Pioneer in Artificial Consciousness.

Publications

2024: [Forward to the Past](#): Participated in 2024 January PirateJam.

2020: [My own Game Engine](#): Arbitrary screen control from scratch.

2019: [Thesis](#): Providing existential perspectives to virtual game characters.

2019: [3D modelling on GMS2](#): 3D processing on 2D camera from scratch.

2015: [Unhackable local variable](#): Hack it, and the program stops.

Experience

2022-2024: Software Development Analyst at [BTG Pactual](#)

Worked for 2 years at BTG Pactual. Development with AWS, project development for Banking Systems and Insurance. Efficient systems to create AWS Cloudformation and entire Microservices automatically.

2018-2022: Software Development Consultant

General software development. Worked as an artificial intelligence researcher, for image processing and creation of neural networks. Parallel processing, project management and database manipulation. Worked for the companies [AtoS](#), [Arbit](#), [Scala](#)

2017: Research on Interactive Systems

Assistance in research through the development of VR environments and AR environmental analysis, for interactive systems on Unity

2015-2017: [ThundeRatz](#) team of Robotics

Development of projects on robotics, while experiencing teamwork, improving technical skills for fast and incremental development.

2014-2016: Laboratory assistance

Assistance in research through the development of mathematical simulations, descriptions and interpretation of results, automation and parallelism.

Personal Projects and Interests

2023-202X: Parametric game engine

Creating a game engine that builds a game during runtime. The engine loads files that can be easily manipulated and builds a complete RPG with monster you can capture, by loading images, audios and text data from the project folders.

2017-202X: CodeStory: A Self-Conscious Universe

Currently working on a [game](#) about virtual consciousness, applying concepts of game design, concept development, parallel development, GPU processing, shaders, game balance, realtime audio editing, communication protocols and modular processing. Using two engines to develop: GameMakerStudio and one engine made from scratch.

2018-2020: Notpron

Solved a [classic internet riddle](#). Learning and adaptation, 100 solvers worldwide.