

Matheus Luís Bernardi

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Education

University of Campinas

Bsc. in Applied Mathematics

Campinas, SP

Feb 2016 - Aug 2020

- **Courses:** Programming, Statistical Theory and Methods, Optimization Theory and Methods, Applied Mathematical Methods

Work Experience

CNPEM

Campinas, SP

Senior Technological Development Analyst

Feb 2019 - Present

- In 2019, joined the Scientific Computing group at LNLS as an intern, working mainly on image processing and image reconstruction algorithms. With few programming experiences, it was a period of great growth, lots of Python, CUDA and mathematical learning.
- In 2020, after graduating from college, been hired as a full-time employee at the Scientific Computing group. Kept working on image processing and reconstruction algorithms, but also started to work on web development, porting some desktop applications to the web and pushing the group to adopt modern web technologies. Also, started to focus on the best practices of software development, enforcing better use of continuous integration and deployment, code reviews and documentation.
- In 2023, in function of an ever-growing interest in web development and software engineering, was transferred to the Control Software group to work on the state of the art web applications that control the accelerators and some processing web interfaces. My current goal is to enable the LNLS to adopt modern web technologies and best practices, hopefully making the web applications the standards for the accelerators community.

Software Projects

Personal Website

matyson.vercel.app

- Utilized: React, Next.js, ReactPDF, Vercel

Pianno

github.com/cnpem/pianno

- Developed a web drawing app to assist Pimega detector alignment process.
- Utilized: React, Next.js, Pixijs, Node.js, Docker

DeepSirius UI

github.com/cnpem/deepsirius-ui

- Developed a web interface for a deep learning based tool for segmentation analysis of tomographic image data.
- Utilized: React, Next.js, Auth.js, Prisma, tRPC, Node.js, PostgreSQL, Docker, Python, FastAPI

Q Lab faz isso?

github.com/matyson/qlab

- Developed a Nyt Connections inspired game for CNPEM "Ciência Aberta" event to expand scientific divulgation while having a good time playing.
- Utilized: React, FramerMotion

Skills

Languages Python, C/C++, CUDA, HTML/CSS, JavaScript, TypeScript, Matlab, SQL

Miscellaneous Linux, Git, Shell, Docker/Singularity, CI/CD

Web Frameworks React, Next.js, Astro, Node.js

Languages

Portuguese Native

English Advanced

Japanese N4