João Natividade

João da Cruz de Natividade e Silva Neto (João Silva Neto) · Belém, Brazil · Remote

joaodacruznatividade+carreira@gmail.com | LinkedIn | GitHub | joaosnet.github.io

PROFESSIONAL SUMMARY

Graduating Computer Engineering student at UFPA with strong hands-on experience in backend development, microservices, and cloud computing (AWS). Practical expertise maintaining and optimizing Python APIs (FastAPI), resolving memory leaks in cross-platform apps (Flutter/Dart), building interactive dashboards with Dash, and developing real-time browser graphics (120 FPS Canvas).

PROFESSIONAL EXPERIENCE

Software Engineering Intern · LaPS / UFPA (DMóvel Assistive Technology)

March 2026 — September 2026 | Belém, Brazil | 360 Hours

- Maintained and refactored Python/FastAPI backend integrated with databases and cloud services on Amazon Web Services (AWS).
- Developed and maintained cross-platform assistive UI in Flutter/Dart and interactive dashboards using Dash (Python), HTML, CSS, and JavaScript.
- Diagnosed and resolved memory leaks and runtime performance bottlenecks in the production mobile app.
- Managed Git branch workflows and produced technical demonstration materials for the SITEC 2026 conference.
- Graded 10.0/10 (Concept Excellent) by the permanent lab advisor.

SELECTED PROJECTS

AetherSense (Rust, ESP32, React, Python, ONNX)

An experimental platform connecting Wi-Fi signals, processing and a web interface to explore camera-free sensing.

- Link: joaosnet.github.io/en/projects/aethersense/ | Código: github.com/joaosnet/aethersense

DMóvel (Flutter, Dart, Web, Android)

An application in the DMóvel ecosystem with web access and mobile distributions, developed in the academic context of LAPSHub.

- Link: lapshub.github.io/dmovel_web_app/ | Código: github.com/LAPSHub/dmovel_web_app

Evolutionary Lab (JavaScript, Plotly, AG, PSO, ED)

A browser-based lab comparing genetic algorithms, particle swarm optimization and differential evolution on benchmark functions.

- Link: joaosnet.github.io/evolutionary-optimization-viz-ag-pso/ | Código: github.com/joaosnet/evolutionary-optimization-viz-ag-pso

Interactive Signals & Systems (Canvas 2D, Three.js, JavaScript, Processamento de Sinais, 120 FPS)

Interactive lab for continuous convolution and Fourier decomposition at 120 FPS. Built with native Canvas 2D and Three.js camera projection, without third-party plotting libraries.

- Link: joaosnet.github.io/interactive-signals-and-systems/ | Código: github.com/joaosnet/interactive-signals-and-systems

TECHNICAL SKILLS

Languages: Python, Rust, JavaScript, TypeScript, Dart, C, SQL, HTML5, CSS3

Backend & Cloud: FastAPI, AWS, Docker, REST APIs, MCP (Model Context Protocol), Dash

Systems & Tools: Git, GitHub Actions, Linux, ESP32, Canvas 2D, Three.js, WebSockets

EDUCATION

Bachelor of Science in Computer Engineering — Universidade Federal do Pará (UFPA)

Bachelor's degree in progress · Expected graduation: 2026 | Belém, Brazil

- Academic Honors: Maximum grade (100/100) in Hardware Design, Software Engineering, Databases, and Cloud Computing.
- Languages: Portuguese (Native) | English (Advanced)