



# Pedro Brait

Computer engineering · Autonomous systems and 3D

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Partner in two companies and contractor for two more. I build systems that operate on their own — agents with real execution access, applied computer vision and generation pipelines — and I have modeled in 3D professionally since 2019. I work by measuring: every result I state comes with the number and the conditions it was measured under.

## EXPERIENCE

2026 — present

### Dark Marlin · Partner

*Partner and developer*

Four-partner dev shop building custom software. The first product delivered was the Emais Network platform, in production taking real payments since May 2026.

Feb 2025 — present

### Octus Forge · Partner

*Partner and modeling project manager*

Custom parts in resin 3D printing. I manage six modelers across Brazil, the United States and India, and review every model before it reaches the printer. I also wrote the internal system that runs the operation, from customer order to packaging.

May 2025 — present

### Ecotechne · Contractor

*AI development and automation*

I build their internal automation with agents: fourteen skills spanning sales, finance and project control — from a won deal in the CRM to a receivable in the ERP, through to month-end close — each stopping for human approval before writing. Earlier I built ecoAIx, computer vision that locates components inside electrical single-line diagrams.

2026 — present

### Datlaz · Contractor

*Computer vision and GeoAI*

I trained the satellite-imagery solar panel detector the company adopted and turned into a product, and the CAPTCHA reader that unblocked collection from public data portals. Models served in-house in ONNX, no paid inference API.

Feb 2025 — Feb 2026

### Rumo · Internship

*Full stack intern and 3D modeler*

Built the Kaizen platform where operations teams file improvement suggestions, the database behind it and a rewards system that credits contributors, plus a second internal system and Excel and email automations for routines that were being done by hand. Modeled the Malha Sul internal award trophies in 3D, from concept to a file ready for manufacturing in plastic and metal.

Jan 2019 — present

### 3D modeling · Freelance

*Independent 3D modeler*

Seven years working for people and groups in Brazil and abroad, on mechanical, 3D-printing and purely artistic projects. Thirty pieces published on ArtStation.

SELECTED PROJECTS

Public · MIT

Scout · Valet · Vizier

A three-layer stack that lets an AI agent research the market, decide and place real brokerage orders, with the safety guard closed by default. Hexagonal architecture, 653 tests, CI and versioned releases. Validated with a real order.

Public

pgsr-fast

Thirteen patches giving 9.5% more iterations per second in Gaussian Splatting surface reconstruction training, with numerical parity proved and an interleaved A/B benchmark.

Public

Quantitative research

Five studies of market hypotheses tested over up to 33 years of data, with out-of-sample walk-forward, after costs, and permutation and bootstrap tests.

EDUCATION

2022 – 2027

Computer Engineering

PUCPR — Pontifical Catholic University of Paraná, Curitiba

In progress · expected 2027

CERTIFICATIONS

- CS50 — Introduction to Computer Science (Harvard), completed 2021
- Repentina CBL — team problem solving (14 h)

LANGUAGES

- Portuguese — native
- English — advanced

SKILLS

LANGUAGES

Python · TypeScript · Rust · C · C++ · C# · Java · SQL

WEB

React · Next.js · Astro · Vite · Tailwind · FastAPI · Node.js

AI & DATA

MCP · RF-DETR · ONNX · PyTorch · OpenCV · pandas · NumPy

INFRASTRUCTURE

AWS · Docker · PostgreSQL with RLS · Vercel · GitHub Actions

3D

Blender · modeling for resin printing · Gaussian Splatting