Manuel Bracchi

Product Engineer, Robotics — Robot operations products, end to end

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Buenos Aires, AR · remote, open to relocation

SUMMARY

I build the products people use to run robots in production, end to end: from the operator's problem to shipping it, keeping it running, and measuring how it's used. 9+ years at robotics startups, 6+ in software, now owning the product a robot delivery fleet runs on. Some hands-on electronics on the side, so I'm confident designing software that runs on real hardware.

EXPERIENCE

Software Engineer — Robot.com

Jul 2022 – Present · Remote from Buenos Aires · Robot fleet operations platform

- Own **Studio** end to end, the app ~220 operators use every day to run the fleet: teleoperation, live mapping, dispatch, call handling and maintenance. **747 registered robots**, ~2,000 robot jobs per weekday.
- Take features from the operators' problem to production, then track errors and usage after each release (Sentry, Mixpanel, ClickHouse) to decide what comes next.
- Low-latency teleoperation and audio/video/control streaming over **WebRTC**, with robust reconnection.
- Led the telemetry migration from WebSockets to **MQTT**: ~27M messages per weekday, peaks of ~600 msg/s in and ~1,800 msg/s out.
- Deploy and operate platform services on **Kubernetes (GKE)** for a continuously connected fleet.
- Architecture and reliability work that helped cut operating costs by **30%**.
- Stack: TypeScript, React, Node.js, Drizzle ORM, PostgreSQL, Redis, ClickHouse, MQTT, NATS, WebRTC, Kubernetes, Sentry, Mixpanel.

Full-stack Developer — EVA Robotics & Retail

Aug 2020 – Aug 2021 · Argentina · Automated retail

- End-to-end software for a live automated convenience store: a React self-service kiosk talking MQTT to store hardware.
- Integrated Siemens PLC controllers and a CMS for live content and inventory.

Independent Contractor, Software & Electronics — Chalin Tech

2020 – 2022 · Remote · Educational robotics

- Built a React web IDE that makes coding a robotics kit approachable for kids.
- Designed the kit's main board schematic and PCB layout.

R&D and Robotics Instructor — RobotGroup Argentina

Apr 2017 – Oct 2020 · Buenos Aires · Educational robotics

- Built small demo robots to show the company's capabilities to clients.
- Taught robotics and microcontrollers (2017 – 2019).

TOOLS

Build: TypeScript, React, React Router, Next.js, React Native, Svelte, Node.js, PostgreSQL, Redis, Drizzle ORM, REST
Robots: MQTT, WebRTC, NATS, WebSocket, robot telemetry & control, Siemens PLC, PCB design, embedded electronics
Ship: Kubernetes, GKE, Docker, CI/CD
Measure: Sentry, Mixpanel, ClickHouse

EDUCATION

Self-taught in software and electronics engineering. Robotics since 2017, software since 2020.