

### SKILLS

Languages	TypeScript, Rust, C++, HTML / CSS, Python, SQL
Technologies	React, Tailwind, webpack, Vite, Next.js, Express.js, Axum
Databases	Postgres, Redis, Prisma ORM, sqlx
Other	Docker, CI/CD, WebGL / OpenGL
Tools	Linux, Git / Github, CMake
Cloud Providers	CloudFlare, AWS, DigitalOcean, Vercel

### WORK EXPERIENCE

#### Fullstack Engineer - TypeScript, React, Node, Postgres Jun 2018 — Present

- Developing web applications, delivering end-to-end solutions using different technologies.
- Building webapps using the PERN stack, TypeScript, and Prisma, with performance-critical tasks implemented in Rust or C++.
- Automating deployments using CI/CD with Docker in AWS or DigitalOcean-like platforms.
- Engineered specialized solutions such as 3D model processing and rendering. Made integrations with local payment processors.

#### Founder - B2B SaaS Mar 2023 — Dec 2024

Smiling Tools [smilingtools.com](https://smilingtools.com)

- Created a SaaS platform to upload and share 3D models of treatment plans for dental aligners, from a freelance into a B2B.
- **Thousands of treatments are created per month**, from small (Even) and **big multinational clients** (KeepSmiling) across LATAM.
- Developed the frontend using TypeScript, React, and a standard UI library. The frontend includes the administration panel, where customers can create cases, edit patient information and upload models.
- Built the viewer using Three.js and custom WebGL shaders (GLSL).
- Implemented the backend with TypeScript, Node.js, and Express, using Prisma ORM for database management.
- Engineered a model pipeline using C++ since model processing is a computationally expensive operation. Models from intraoral scans and dental software come in a variety of formats, some of which I reverse engineered.

#### Software Engineer - FOSS Apr 2021 — Dec 2023

ChatAnalytics [chatanalytics.app](https://chatanalytics.app)

- An open-source app to analyze chat messages that has +777 stars and many forks, **used daily to generate hundreds of reports**.
- Developed using TypeScript, React and Styled Components. For privacy reasons data is processed in the browser, so no back.
- Optimized the pipeline to process millions of messages and many GBs of data leveraging JSON streaming, custom serialization, data analysis, and WebWorkers.

#### Founder Mar 2020 — Sep 2021

CountAPI (acquired by APILayer in 2021) [countapi.xyz](https://countapi.xyz)

- A counting API made with TypeScript, Express and Redis which **processed over 6 billion requests** until its acquisition.
- Optimized to be fast and cheap to operate, to make the service viable and scalable.
- Developed using TypeScript, Express.js, and Redis; leveraging Redis' scripting language (Lua) to maximize performance.

#### Game Developer - C++ Sep 2018 — Oct 2021

ORBz [orbz.io](https://orbz.io)

- A browser-based massively multiplayer online game where the player control the distance of three orbs around him.
- **It has been played 1.2 million times, and 10 thousand users have registered!** Reached 200 concurrent players at peak.
- Built using C++, powered by my personal game engine and a custom network protocol made on top of WebSockets.
- Developed the frontend using TypeScript and React; the backend using TypeScript, Node.js, Express.js, Postgres and Redis.

Many more projects are available at [mlomb.dev](https://mlomb.dev).

### EDUCATION

MSc + BSc in Computer Science, University of Buenos Aires 2019 — 2024

### AWARDS

BRONZE MEDAL - National Programming Olympiad (Argentina, OIA)	2018
SILVER MEDAL - Ibero-American Competition of Informatics and Computing (CIIC)	2018
Rank 7 & 18 globally in Halite 2 and 3: AI competitions from TwoSigma	2017 & 2018