



# Matheus Costa

Senior Software Engineer

Experienced Software Engineer with a focus on web development, bringing 8 years of industry experience to the table. Proficient in Node.js, TypeScript, React, Vue.js, Lua, and C++, I possess a strong drive and ambition to utilize my skills in creative problem-solving. My goal is to design, develop, and optimize systems and software that drive growth and sustainability. With a proven track record, I confidently approach complex challenges, delivering innovative solutions of the highest quality.

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📅 Years of experience 8 years

## 📁 Technical Skills

Skill	Years	Level
Node.js	8	Expert
TypeScript	6	Expert
JavaScript	6	Expert
HTML	6	Expert
CSS	6	Expert
React	4	Expert
C++	3	Intermediate
Lua	3	Intermediate
Vue.js	2	Intermediate
Python	1	Intermediate
PHP	1	Basic
Angular	1	Basic

### Additional skills:

AWS Git Docker Kubernetes Terraform MySQL PostgreSQL MongoDB Prisma Sass Tailwind  
 MUI Jest Cypress Puppeteer Webpack Gulp Linux Electron MVC REST Web Sockets  
 GraphQL Optimizations Scrum Kanban Agile TDD CI/CD Github Actions Gitlab CI AWS S3  
 AWS CloudFront AWS SES AWS EKS AWS Lambda AWS Elastic Beanstalk Vuex Redux Nest.js  
 Express.js Next.js Protobuf

## 📁 Work History

- Senior Software Engineer** October 2024 - Present  
2 months  
 Xometry  
**Campaign Management App - Testing Suite**
  - Xometry is a leading digital marketplace for on-demand manufacturing services, connecting customers with a global network of manufacturing partners to streamline the production process and deliver high-quality parts.
  - Implementing scenario and unit tests for the Campaign Management App using Jest, React Testing Library, MSW, and GraphQL mocks.

Jest React Testing Library MSW GraphQL
- Full Stack Engineer** February 2023 - September 2024  
1 year 8 months  
 Blue Orange Digital  
**Lead Developer - Insight Partners**
  - Insight Partners is a leading global venture capital and private equity firm specializing in high-growth technology investments, providing strategic guidance, operational support, and capital to help companies accelerate their growth and achieve their goals.
  - Developing and maintaining the back-end infrastructure for a cutting-edge platform designed for Insight Partners' portfolio companies.
  - Implementing robust and scalable solutions to ensure seamless integration with various services and systems.
  - Playing a key role in building the platform's core functionalities, such as initiating advisory engagements and facilitating access to the Scaleup Academy.
  - Collaborating closely with cross-functional teams, including front-end developers and designers, to deliver a cohesive and user-friendly platform experience.
  - Optimizing the performance and reliability of the platform through thorough testing, debugging, and continuous improvement.
  - Ensuring the security and integrity of the platform by implementing best practices and following industry standards.
  - Designing and developing APIs to facilitate data exchange and integration with external systems.
  - Collaborating with stakeholders to gather requirements, identify opportunities for improvement, and propose innovative solutions.
  - Participating in agile development processes, including sprint planning, daily stand-ups, and retrospective meetings.

Next.js Nest.js Tailwind Prisma PostgreSQL React Query AWS S3 CloudFront SES EKS Lambda Serverless  
 SQS Docker Kubernetes Terraform Node.js Axios MUI
- Front-end Engineer** July 2020 - March 2023  
2 years 8 months  
 Rock  
**Rock Front-end**  
<https://rock.so/>
  - Contributed to the development of Rock, a purpose-built platform for remote work that enables a seamless transition to a more asynchronous way of working.
  - Rock offers a combination of messaging, task management, note-taking, video calls, and file sharing to facilitate a wide range of activities, from product development to recruiting and marketing campaigns.
  - Joined as a Front-End engineer, acquiring proficiency in Vue.js, Vuex, Protobuf and Electron.
  - Played a pivotal role in making key technical decisions regarding the project's architecture, proposing and implementing multiple refactors that enhanced the development process, user experience, and application performance.
  - Successfully implemented numerous core features of the application, including the task board, time tracker, chat virtual scroller, task virtual scroller, and many more.
  - Helped porting the application to Electron using Node.js, facilitating its release across multiple platforms, including Windows, Linux, and Mac.

The project is still ongoing and continues to experience growth, with thousands of active users.

Vue Vuex TypeScript Electron Node.js SCSS Protobuf Web Sockets
- COVID-19 Researcher** May 2020 - July 2020  
2 months  
 Universidade Federal Fluminense  
**COVID-19 Research Group GET-UFF**  
<https://covid19.getuff.com.br/>
  - Worked with the modeling team building visualization tools, data scraping algorithms to gather data from official government sources, epidemiology models such as SIR and SEIR.
  - In charge of parameter optimization in Python using a modified version of the particle swarm optimization method.
  - Used Python and R to make graphs and predictions using those models.

It was used by the local government to make key decisions on how to fight the COVID pandemic, with my university's city being one of the lowest cases due to the cooperation of the university and the government in those decisions.

Python R Optimization Data Analysis
- Teaching Assistant** January 2017 - November 2018  
1 year 10 months  
 Universidade Federal Fluminense  
**Problem Solving Laboratory**
  - Aided freshmen in the first semester of Computer Science to evaluate ICPC problems and create elaborate solutions.
  - The problems were solved in Python as it was the first language they taught in my university.
  - In charge of a lot of problem solving to gather a list of problems and topics to improve the classes by better matching the content of other programming classes with the laboratory class.

Won an award of best teaching assistant in the department of computer science and was invited to give a presentation of the project and show the outcome of those efforts through the year to other departments.

Problem Solving Python
- C/C++ & Full-Stack Developer** December 2016 - July 2020  
3 years 7 months  
 Freelancer  
**The Forgotten Server**  
<https://github.com/otland/forgottenserver>
  - Successfully completed various freelance projects, ranging from Full Stack web applications to MMORPG private servers with tens of thousands of players, gaining expertise in debugging multithreaded servers, reverse engineering game network protocols, and DLL injection.
  - Gained valuable experience as a software developer by actively contributing to an open-source project with a thriving community.
  - Benefitted greatly from diverse interactions with individuals from various backgrounds and skill sets while working on the implementation of a popular game server written in C++.
  - Consulted by numerous individuals seeking guidance on enhancing their projects, including bug fixes to prevent crashes and performance optimizations for improved server performance.
  - Developed multiple websites to facilitate user interaction with the server, enabling account and character creation. Utilized technologies such as PHP, MySQL, HTML, and CSS.

The project continues to thrive with a significant user base.

C++ Lua TypeScript Node.js React Network Protocols DLL Injection MySQL PHP HTML CSS Open Source  
 MongoDB

## 📁 Side Projects

- Mkalo.dev**  
<https://github.com/Mkalo/my-portfolio>
  - Developed my personal website using the RedwoodJS framework with React, TypeScript, Tailwind, GraphQL and Prisma.
  - Integrated the website with Vercel deploying it to the edge, providing a fast and reliable experience to the users.
  - Implemented a PDF renderer to generate a resume PDF dynamically from the website using Puppeteer, deployed to AWS Elastic Beanstalk.

React AWS Lambda AWS Elastic Beanstalk TypeScript Node.js HTML CSS RedwoodJS Tailwind Prisma GraphQL
- Zippia Clone**  
<https://github.com/Mkalo/zippia-project>
  - Developed a clone of the Zippia website using Next.js, React, TypeScript, Tailwind and Axios.

Next.js React TypeScript Tailwind Axios
- Benchmark Node Native Addons**  
<https://github.com/Mkalo/benchmark-node-native-addon>
  - Developed a benchmark to compare the performance of Node.js native addons with pure JavaScript.

C++ Node.js JavaScript NAN Open Source
- TypeScript Otservr**  
<https://github.com/Mkalo/typescript-otservr>
  - Developed project in TypeScript, where the goal was to learn TypeScript by implementing the server and protocol of a MMORPG, similar to the open-source one in C++.

TypeScript Node.js MongoDB Open Source
- WeaaBot**  
<https://github.com/Mkalo/WeaaBot>
  - Worked on WeaaBot, a project to learn TypeScript, Node.js, Angular by implementing a multi-platform chat bot for Discord and Twitch.
  - Separated it in three repositories: WeaaBot, main application for express API and Discord Bot.
  - Wrote in TypeScript and used MongoDB for storage and Express.js for API.
  - WeaaBotTwitch, the bot for Twitch that would connect to the IRC channels to interact with users on Twitch.
  - WeaaBotWeb, website for the bot to show statistics and allow the user to login/register.

TypeScript Node.js Angular MongoDB HTML CSS Bootstrap
- Electron-PixiJS-TypeScript**  
<https://github.com/Mkalo/electron-pixijs-typescript>
  - Developed a template project that had everything to get started building a game for both web and desktop using TypeScript, Electron and PixiJS.

TypeScript Electron PixiJS Open Source Webpack Gulp

## 🎓 Education

- September 2016 - June 2021  
**Universidade Federal Fluminense**  
 Bachelor of Computer Science
- January 2013 - December 2015  
**Public School Herbert de Souza**  
 High School

## 🏆 Awards

- 2023  
**First place in the Insight Partners Hackathon**
- 2018  
**Third place in the Programming Marathon during the Computing Week event at the Federal Fluminense University**
- 2017  
**First place in the Programming Marathon during the Computing Week event at the Federal Fluminense University**
- 2016  
**Second place in the Programming Marathon at Visagio's 2016 Programming Marathon**