Marco Labarile

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About me:

Technical leader, pragmatic architect and hands-on software engineer.
Avid learner. My curiosity inspires me and pushes me to continuously self-learn.
I love sharing what I learn through live teaching and blogging.
Product mindset. I deeply care about end users and craft software to fit their needs.

I have been passionate about computer science since I first got my hands on a PC. I started fiddling with a Windows 98 terminal then at 13 years old I wrote my first program, a simple Visual Basic calculator. That was the start of my journey in the IT world.

Preferred tech stack: Node.js, Postgres, AWS/Linux self-hosting. Still, I enjoy working with new techs as much as exploring new business domains.

My hobbies: music production, reading, writing, weightlifting and spending time in nature.

WORK EXPERIENCE

02/2021 – CURRENT Santeramo in Colle, Italy
CTO & CO-FOUNDER TEKMORE S.R.L.

Engineering experience:
- Researched and ported to web browsers experimental AR algorithms. Tech stack: Javascript, OpenCV, C++, Web Assembly.
- Set up from scratch the whole organization's tech infrastructure and practices.
- Designed and built the backend of a B2B Augmented Reality Saas. Main concepts: analytics, self-hosted infrastructure. Tech stack: Node.js, Typescript, Express, Postgres, TimescaleDB.
- Designed and built the backend of a research experiments management platform for one of the most active healthcare research organizations in Italy. Its main feature is monitoring subjects and their physical activity over the experiments' lifespan. The system has a back-office web app to monitor the experiments and a mobile app used by the subjects which connects to a wearable tech device that collects health data. Main concepts: performance, data ingestion, aggregation and reporting, self-hosted infrastructure. Tech stack: Node.js, Typescript, Express, Postgres, TimescaleDB.
- Designed and built the backend for a tourism e-commerce platform. Main concepts: distributed systems, scalability, payments. Tech stack: Node.js, Typescript, Express, Postgres, AWS (EC2, RDS, DMS, Kinesis, Lambda, S3, SQS, Cloudformation), Stripe.
- Designed and built the backend for an internal CRM platform. Main concepts: systems integration, self-hosted infrastructure. Tech stack: Node.js, Typescript, Express, Postgres.

Management experience:
- Managed teams of up to 5 people with mixed backgrounds and contract types (i.e. employees and freelancers).
- Set the tech vision for the company.
- Set up the consultancy branch of the company.
- Set up tech interviewing practices for the company.
- Mentored senior engineers.

Product experience:
- Participated in product management and helped focus efforts by prioritizing features in the company's AR products.

- Participated in game design. Used my previous game mechanics experience to add fun and replayability to a mobile game.

12/2019 – 01/2021 Matera, Italy
LEAD SOFTWARE ENGINEER & TECHNICAL TRAINER NITRO AGILITY S.R.L.

Engineering experience:
• Built the backend of a document aggregation and search system for an Italian S.p.A company dealing with high volumes of data. Main concepts: microservices, scalability, systems integration. Tech stack: Java Spring, Kafka, S3, ELK (ElasticSearch, Logstash, Kibana), Grafana.
• Integrated Grafana into an existing legacy VB.NET project.
• Built a multi-tenant system to manage patient queues in hospitals. IoT devices in hospitals' waiting rooms allow patients to see the state of each queue. A web app is used by each hospital's staff to manage the respective patient queues. Tech stack: C# on .NET Core, CosmosDB, Angular, Event Hub, Azure IoT Hub.
• Built a multi-tenant system to manage appointments and visits for patients and doctors. Main features: mobile app for patients, remote examinations via video calls, web app for doctors, backend integration of the existing client's digital healthcare services. Tech stack: C# on .NET Core, CosmosDB, Angular, React Native, App Center. The system was deployed to Azure and integrated with the aforementioned patient queues management software.
• Worked on the backend of a multi-tenant finance platform. In particular, I designed an auth solution to meet the platform's security and scalability needs. Main concepts: microservices, scalability, high security. Tech stack: Java Spring, Python, Django, Kafka, S3, ELK (ElasticSearch, Logstash, Kibana), AWS Cloudwatch.
• Implemented new search features in a system handling high volumes of documents for a big financial corporation. Main concepts: big data, security policies, legacy software, scalability, and data integrity. Tech stack: C# on .NET, MSSQL, ELK (ElasticSearch, Logstash, Kibana).
• Built an inventory management system's backend for a manufacturing company starting from the client's API specification. Concepts: integration, scalability. Tech stack: Node.js, Express, Typescript, MongoDB.

Technical training experience:
• Designed, built and taught a course on software security for a national Communications and Infrastructure company. Main topics: OWASP Top 10, attack & prevention techniques in .NET, basic cryptographic theory. At the end of the course, participants were able to: evaluate the security implications of technological choices, exploit and prevent the most common vulnerabilities of ASP.NET web applications.

Management experience:
• Managed international and distributed teams of up to 5 people with mixed seniority levels. The primary language was English.
• Conducted remote tech interviews for international candidates in English.

04/2017 – 12/2019 Santeramo in Colle, Italy
SOFTWARE ENGINEER & TECHNICAL TRAINER CODE ARCHITECTS S.R.L.

Engineering experience:
- Researched and developed a workflow engine for distributed applications. Main features: developer-friendliness, extensibility, scalability, cross-platform compatibility. Tech stack: C# on .NET Core, Typescript on Node.js and web browsers, MSSQL, MySQL, RabbitMQ, Azure Service Bus, ELK (ElasticSearch, LogStash, Kibana), Docker.
- Built the backend of a multi-tenant invoicing platform with .NET Core microservices in the Azure cloud. Main concepts: polyglot persistence (MSSQL, CosmosDB, Blob Storage), distributed monitoring and tracing, Saga pattern for distributed transactions, eventual consistency (Azure Service Bus, RabbitMQ, Azure Event Hub), sync/async communication protocols (HTTP REST, AMQP). Each microservice was dockerized and deployed to a Kubernetes cluster. The platform today is amongst the best ones for Italian professionals.
- Developed cross-platform CI and CD tools with Typescript, Node.js and C# on .NET Core. These tools have been integrated with third-party build agents systems and source control providers to automate the software production process of the company.
- Developed a framework for data modeling and source code generation. This framework allows clients to quickly create PoCs and also keep the projects maintainable in the long run (governance through code). The code generation engine is based on Node.js and has its own CLI; it supports several languages and it's easily extensible. I also built a companion desktop application with Electron and the MEAN stack that allows developers to visually model data and then feed the model to the code generation engine. Most of the company's projects are based on this framework.

Technical training experience:
- Designed, built and taught a course on Microservices offered to professional .NET software engineers. Main topics: data modeling, service integration, splitting monoliths, deployment, testing, monitoring, security and scalability. At the end of the course, participants were able to understand the problems solved by microservices and how to design and implement a successful microservices project.
- Designed, built and taught a course on Web Development Fundamentals offered to high school students. Main topics: HTML 5, CSS & SCSS, Javascript & Typescript, Node.js. At the end of the course, students were able to build a real-time chat application.

Management experience:
- Managed teams of up to 2 people working on internal products.
- Mentored junior developers.

Product experience:
- Designed and improved internal tools for developers.

05/2014 – 09/2014 Santeramo in Colle, Italy
SOFTWARE ENGINEER (TRAINEE) CODE ARCHITECTS S.R.L.

Engineering experience:
- Built a restaurant table management system. Tech stack: MEAN (MongoDB, Express.js, Angular, Node.js, Typescript).

05/2013 – 09/2013 Santeramo in Colle, Italy
SOFTWARE ENGINEER (TRAINEE) CODE ARCHITECTS S.R.L.

Engineering experience:
- Built the front end of a web application in the medical domain. Tech stack: HTML, CSS, Knockout.js, Typescript.

EDUCATION AND TRAINING

2015 – 2017
ATTENDED THE BACHELOR'S DEGREE PROGRAM University of Bari - Mathematics

2010 – 2015
HIGH SCHOOL DIPLOMA IISS Pietro Sette - Information systems - 100/100

LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	C1	B2	B2	C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

ADDITIONAL INFORMATION

JOB-RELATED SKILLS

Communication & Management

- **Team communication**. I effectively communicate in the context of an engineering team thanks to my previous experience in collaborative software design and implementation.

- **Team and culture building**. I enjoy keeping the team's morale as high as possible. In my past experience, I organized company challenges, talks and other activities that stimulate every team member's interest in the job.
- **Project & Team management**. I have experience leading Agile teams (Scrum/Kanban) of up to 5 software engineers. I'm able to teach new technologies and methodologies to software developers. I've mentored several juniors into autonomous and driven professionals.
- **Client relations management**. I gained this skill through my experience in consultancy companies and a B2B tech startup.
- **Employee relations management**. I acquired this skill through my experience as Co-Founder and CTO of a tech startup.
- **Public speaking/teaching**. I have experience in teaching technical topics to beginner and intermediate-level IT professionals. I can also create presentations of projects/technologies to a technical audience.

Developer Experience

- **Automation**. I find and improve the weak points of a working environment. For example, I love automating tasks and processes by empathically listening to stakeholders to understand their pain points and find an efficient solution.

COURSES

09/2014
Introduction to Neuroeconomics - Coursera

Course on neuroeconomics (i.e. application of neuroscience tools and methods to economic research) offered by HSE University on Coursera.

06/2014
Machine Learning - Coursera

Course on machine learning offered by Stanford University on Coursera.
I learned how to write a neural network from scratch using Octave.
As the final project, I built an anti-spam system.

03/2014
Artificial Intelligence Planning - Coursera

Course on writing planning software using AI techniques, offered by the University Of Edinburgh on Coursera.
As the final project, I built an AI planner tested on the Dock-Worker-Robot domain.

12/2013
General Game Playing - Coursera

Course on general game playing techniques offered by Stanford University on Coursera.
As the final project, I built a general game player program that competed against other agents in a public AI competition.