

Erik Pellizzon

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Work Experience

Freelancer

Padua, Italy

SOFTWARE ENGINEER (REMOTE)

Nov 2023 - Present

- Working as an independent software engineer on the backend part of SaaS applications.
- Reversed APIs from various external websites and implemented custom clients in **Go**, to build an **aggregator** of external financial **forex data sources**.
- Managed and improved the code for **microservices in Go** that communicate with each other using a **message queue** and with publicly exposed **REST APIs** to access data stored on databases.
- Integrated several **external API services** within the current **Go** codebase to extend its functionality and gain the ability to interact with external systems and retrieve data in real time.

GardaWorld Security - Crisis24

Konstanz, Germany

SOFTWARE ENGINEER (REMOTE)

Sep 2022 - Nov 2023

- Worked on a SaaS platform in the **Travel Risk Management** sector, which enables employees to stay safe while traveling, using sensitive data such as their location to send personalized security alerts. Crisis24 services are used by 50% of Fortune 500 companies.
- Improved the **Ruby on Rails** application backend (+ **Go microservices**) by fixing bugs and adding new features, modifying the **Ember.js** frontend when necessary.
- Reduced by 15% the average response time of internal **Ruby** microservices & exposed **GraphQL APIs** used by third-party software, by optimizing the **Redis** caching layer for the production environment on **Google Cloud**.
- Replaced a dataset that hadn't been updated in 10 years with a **Python** project created from scratch that dynamically builds an updated country border dataset using OpenStreetMap data and the Shapely library, saving the result in a **PostgreSQL** (with PostGIS) database.

Open Source Developer

Remote

VOLUNTEER

May 2020 - Sep 2022

- Volunteered to improve publicly available software projects on Github, improving both my software development and team collaboration skills.
- Fixed bugs found in public projects that used the **Go** programming language.
- **Contributed** to the development of the **Go language itself** by improving the performance of the standard library of the Go programming language (specifically the base64 encoding part), starting with Go version 1.20.

Skills

Languages Go, Python, C, Java

Database PostgreSQL, Redis, Apache Cassandra, MongoDB

Backend Distributed Systems, Microservices, Git, Docker, Google Cloud Platform

Projects

Go Programming Language

Open Source Contributor

- Made **6 proposals** for code changes and 3 of them were accepted by the project maintainers and are now part of the Go compiler code.
- One of these changes is an optimization that **increased encoder initialization performance for Base32 and Base64 by 40%** by changing memory initialization implementation.

PiSquared

- Created a Telegram bot using **Go** that asks the user a question and then uses Natural Language Processing multilingual **text similarity** to calculate the **percentage of correctness**, based on a predefined answer.
- The project was praised by the author of the machine learning library used, for the creativity of the implementation.
- Obtained a job because of an endorsement received through this project.

Serializer to Binary Object Representation

- Created from scratch a **MessagePack serializer** (JSON-compatible binary format) that accepts native **Go** values as input and converts them correctly using runtime **reflection**.
- Made the code easy to read, reaching **95% code coverage in tests**.

Education

Technical Institute Francesco Severi

Padova, Italy

A.S. COMPUTER SCIENCE

- Software Engineering & Programming (Java, C), Concurrent Programming (Java), Algorithms & Data Structures (Java)
- Web Development - Backend (PHP, MySQL) & Frontend (HTML, CSS, Javascript)
- Operating Systems, Computer Networks, Distributed Systems (Designing Data-Intensive Applications)

Certifications

2022	<u>Apache Cassandra 3 Associate Developer (DataStax)</u>
2022	<u>MongoDB 5.0 Associate Developer</u>
2021	<u>Google Cloud Developer Specialization</u>