

Erik Pellizzon

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Work Experience

Garda Security - Crisis24

Germany / Canada / USA

SOFTWARE ENGINEER (REMOTE)

Oct 2022 - Present

- Worked on a **Travel Risk Management** platform, which enables employees to stay safe while traveling using sensitive data such as their location to send personalized security alerts. GardaWorld services are used by 50% of Fortune 500 companies.
- Improved the **Ruby on Rails** application backend by fixing dozens of discovered bugs and adding new features, modifying the **Ember.js** frontend when necessary.
- Reduced by 15% the average response time of internal **Go & Ruby** microservices called via **GraphQL & REST APIs** by optimizing the code and integrating a **Redis** cache into the application deployment on **Google Cloud**.
- Replaced a dataset that hadn't been updated in 10 years with a new **Python** project created from scratch that manipulates geospatial data and saves the result in a **PostgreSQL** database.

Know IT All

Dublin, Ireland

EU-SPONSORED INTERNSHIP

Jul 2022 - Sep 2022

- Enabled managers to view aggregated results from more than **50 online data sources** by creating a graphical interface that uses a program to automate the collection of updated information.
- In a team of 5 people, made the official site more attractive, **increasing** its Google PageSpeed **score by 20%**, helping to **redesign** and simplify its appearance.

Skills

Languages Go, Python, C, Java

Database PostgreSQL, Apache Cassandra, MongoDB

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

Projects

The 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.

Apache Lucene

Open Source Contributor

- Made Lucene search code more readable and effective by **removing an unnecessary null check** and updating the documentation accordingly.

BigMetric

- Designed a distributed system to process **thousands of temperature sensor readings** and save the result into an **Apache Cassandra** database cluster, and then visualize the results using **Grafana** time series charts.
- The sensors send the temperature value every 10 seconds to various **Java Spring microservices** using **Apache Kafka**.
- Written appropriate unit and integration tests to check the correctness of results.

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	Apache Cassandra 3 Associate Developer (DataStax)
2022	MongoDB 5.0 Associate Developer
2021	Google Cloud Developer Specialization