

Erik Pellizzon

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Work Experience

Revpool

Warrington, UK

SOFTWARE ENGINEER (REMOTE)

Nov 2023 - Present

- Worked on the **software infrastructure** that allows professional sports bettors to beat the theory of efficient markets applied to **sports betting**, placing **automated bets** on hundreds of websites without having to manage the complexity.
- Reversed APIs from various external sites and implemented clients in **Go** that follow a standard interface, to build an **aggregator** of external **data sources** into a single platform.
- Worked on a globally distributed **private proxy network** managed by the company and a flexible custom **job scheduler**.
- Implemented a **website scraper** in Go that perfectly emulates a browser, replicating advanced techniques such as TLS fingerprinting and HTTP/2 fingerprinting to **bypass the anti-bot** protections of popular **CDNs**.

Garda Security - Crisis24

Konstanz, Germany

SOFTWARE ENGINEER (REMOTE)

Sep 2022 - Nov 2023

- 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.

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.

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