Francesco ZOFFOLI

CONTACTS

PHONE:	(+44) 7445 043200
EMAIL:	francesco.zoffoli@hotmail.com
LINKEDIN:	https://www.linkedin.com/in/francesco-zoffoli-48ba23110
REPOSITORIES:	GitHub/Makers_F , Bitbucket/Makers_F

WORK EXPERIENCE

Present
APR 2020

FACEBOOK INC., London
Senior Software Engineer - Technical Lead

I worked as the technical lead on the team developing the alerting system, which is used to monitor issues happening in Facebook, Whatsapp, Instagram and all the internal systems. The highly-available system stores the alerts generated by code and metrics and determines the responsible party to which they should be escalated. It receives multiple billions of requests a day from machines across all data centers. The system is critical for detecting, preventing and resolving issues inside all of the Facebook products.

As technical lead, I set the vision of the alerting product for the coming years, I coordinated the planning for the projects of the team, I helped grow the team by assisting them and mentoring them. I also helped coordinate department wide initiatives.

My contributions in the team included

- contributing across multiple teams, driving the design and the implementation of key features for the integration of our system with powerful workflows, including a new system for enforcing the data quality of the generated alerts and a new API for rich and efficient querying of alerts

- improve the reliability of the system and oncall load by reimplementing the storge layer shard management code and addressing multi-threading issues, reducing the latency on the reverse query lookup code by 5x (p95 from 60s to 10s), reducing the memory usage (bottleneck) of our storage system by 30%, implementing a self-adaptive system which identifies and rejects problematic user queries at runtime

- drive the rearchitecture of the system to address scalability, availability and durability concerns

Main technologies: C++, Python, React, MySql, Thrift, Internal IaaS (similar to AWS/Azure offerings).

MAR 2020
AUG 2016

BLOOMBERG LP, London
Software Engineer

I worked in the Sharing Framework team, which provides to the Application Teams in Bloomberg a set of services to enable their users to share, access and edit content with users or groups in their network. The system, in the form of services and UI components, is heavily used by some of the most used functionalities of the Bloomberg Terminal. I worked in an agile team, owning the full stack of the framework.

- I developed the product by working with the business and engineering stakeholders, collaborating cross-team to lead the integration efforts for key features including immutable shares, real time notifications, the permissioning system.

- I architected, designed and implemented systems that handle multi-million requests per day, ensuring their ability to scale and be resilient to failures.

- I was part of the group coordinating *Software Development Life Cycle* improvements for my area (200+ engineers): I especially cared about improving testing, monitoring, and integrating CI&CD.

- I mentored new team members and interns: I won the *Best mentor of the year* award out of 150+ mentors.

- I provided training to my team, including C++ modern features, cmake, docker.

- I was involved across the organization to contribute to the advancement of Bloomberg wide internal infrastructure, including reducing the time needed by the build system, contributing libraries to ease testing and submitted fixes and enhancements to the internal C++ standard library.

Main technologies: C++, Python, SQL, Redis, RabbitMQ, Kafka, Javascript, Docker.

Publications & Talks

Oct 2021	**CppCon 2021: Automatically Process Your Operations in Bulk With Coroutines**
Talk	The talk covers how coroutines can be leveraged to automatically perform operations in bulk. It starts from explaining how coroutines work in C++20 and building on top of that, with interactive visualizations, it teaches how to use them to perform bulk operations.
	Abstract (Conference Site)
May 2020	**C++ London: Corobatch - Batch operations, simply, with coroutines**
Talk	Talk about how coroutines in C++ can be used to automatically batch operation while writing code that operates on a single item. It's the overview and implementation of one of the projects in my github account.
	Talk Video
Mar 2019	**C++ Fundamentals - Francesco Zoffoli, Antonio Mallia**
Book	*Packt Publishing*, ISBN: 9781789801491
	The book covers the most fundamental aspects of C++ for application development.
	It starts with the concepts of types, functions and classes, providing best practices for their use.
	It then introduces the topic of templates, inheritance and memory management, making sure to also teach the many algorithms and data structures in the standard library.
	Particular attention is given to modern features introduced in the recent standards C++14 and C++17.
	It sold several thousands copies and had very positive reviews.
	Publisher Website

Education

Apr 2016	Master of Science in Computer Engineering, **Politecnico di Milano**, Milan
Oct 2013	*Score:* 110/110 *cum laude*
Feb 2016	Internship Program at **National University of Singapore**, Singapore
Oct 2015	As a bilateral collaboration on the Master thesis
Jun 2014	Exchange Semester at **Case Western Reserve University**, Cleveland, Ohio, USA
Jan 2014	Gpa: 4.0/4.0
Sept 2013	Bachelor of Science in Computer Engineering, **Politecnico di Milano**, Milan
Sept 2010	*Score:* 99/110

Scholarships and Certificates

2015	High Merit Student Scholarship 2015
2014	High Merit Student Scholarship 2014
2013	TOEFL (iBT) 111/120 (Reading:30, Listening:30, Speaking: 23, Writing:28)
2012	TOEIC: 980/990

Skills

Programming Languages	*Proficient*: C++, Python, Java
	Effective: JavaScript, C
Technologies	RDBMS(MySql, PostgreSQL, DB2), Redis, RabbitMQ, Kafka, RPC (Thrift), Docker, Jenkins, React
Hard Skills	software desing & architecture, testing, distributed systems, API design
Soft Skills	communication, project management, mentoring, teamwork leadership

Personal Projects

Resilient	An expressive **C++** library for handling failures	GitHub Project
Jenetic Algorithm	An multi-threaded genetic algorithm library written in **Java**	GitHub Project
LoLScraper	A **Python** library for scraping Riot Games public REST API	GitHub Project
CollisionCore	A **Java** and **Android** collision library for 2D pixel perfect collision	GitHub Project
TeamComp.net	A **Django** website to display aggregate data over the performances of teams in the online game League of Legends. Leverages **PostgreSQL**, **Memcache**, **Cloudnit**	
Full Project List	Visit my GitHub, Bitbucket or LinkedIn accounts	

Languages

English	Fluent
Italian	Mother tongue

Tech Interests

Working collaboratively, Best practices in software engineering, Mentoring and Teaching, Programming languages, Open Source, Distributed Systems, Conferences

INTERESTS

Skiing, kite surfing, workouts, cheesemaking, cooking