Jean-Charles **Quillet**

SENIOR SOFTWARE ENGINEER · FUNCTIONAL PROGRAMMING

13, rue du clos romain, 35120 Dol-de-Bretagne, FRANCE

📱 (+33) 6-65-13-50-75 | ✉ jeancharles.quillet@gmail.com | 🏠 jeancharles.quillet.org | ⬛ jecaro | in jeancharlesquillet

Summary

Senior software engineer with twenty years of experience across backend systems, network servers, and simulation software. Strong expertise in C++ (10+ years) and functional programming with Haskell (5 years). Proficient in systems design, performance optimization, and developing correct, safe, and robust software. Actively involved in open-source software, both as a contributor and as a maintainer.

Skills

Systems	Distributed systems, backend services, simulation software
Methods	Test-driven development, code review, CI/CD pipelines
Domains	Networking, Computer Graphics, Geographic Information Systems
Programming languages	Haskell, Rust, C/C++, Zig, Python, Elm, TypeScript, Bash, Lua, Matlab
Tools	Git, nix, PostgreSQL, MySQL, Redis, Kafka, Docker, Kubernetes, OpenTelemetry
Languages	French: mother tongue, English: fluent, Spanish: beginner

Experience

Tiko
Zürich, Switzerland / Remote

BACKEND DEVELOPER — *Since 01/2024*

- Worked on the interface between IoT devices (over 300k deployed) and backend services
- Implemented observability features for an in-house database, improving monitoring, logging, and performance insights
- Participated in on-call rotation for production monitoring and incident handling
- Technical environment: Linux, Haskell, C++, Java, nix, Kubernetes, PostgreSQL, MySQL, Redis, Kafka, MQTT, OpenTelemetry

Secucloud
Hamburg, Germany / Remote

CLOUD SOFTWARE DEVELOPER — *11/2020 - 11/2023*

- Developed cloud-based network security software as part of a SASE (Secure Access Service Edge) system
- Implemented an Active Directory connector for seamless synchronization of users and groups
- Optimized network proxy performance, increasing throughput by 50%
- Technical environment: Linux, Haskell, TypeScript, nix, MySQL, Ansible, Redis, Clickhouse

Epitech
Rennes, France

FUNCTIONAL PROGRAMMING TEACHER — *09/2021 - 06/2023 (part-time)*

- Supported students with their Haskell projects
- Technical environment: Linux, Haskell, nix

Scalian
Rennes, France

SOFTWARE DEVELOPER FOR AN IT SERVICES COMPANY — *04/2007 - 11/2020*

- Developed simulation software within the Simulation, HPC and Virtual Reality department
- Delivered multiple fixed-price projects on time and within budget for clients including the French MoD, ONERA, CEA, CNES, IRSN
- Architecture and technical lead
- Collaborated with researchers and physicists to gather requirements and deliver tailored software solutions
- Technical environment: Windows/Linux, C++, Python, Matlab, Qt, openscenegraph, gdal

LaBRI Analysis and indexing video team (University lab)
Bordeaux, France

RESEARCH ENGINEER — *07/2006 – 08/2006*

- Prepared the video indexing contests TRECVID and ARGOS
- System administration
- Technical environment: Linux, C/C++, XML, Perl, Bash

INRIA IPARLA team (French IT lab)
Bordeaux, France

RESEARCH ENGINEER — *09/2004 – 04/2006*

- Visualization of city models on mobile devices though non-photorealistic rendering
- Wrote and presented a scientific paper to the Web3D 2006 conference
- Technical environment: Linux, Windows, Windows Mobile, C/C++, Bash, Perl, VRML97, X3D

Keyghost *Christchurch, New-Zealand*

SOFTWARE DEVELOPER *04/2003 - 12/2003*

- Developed a desktop application to interact with a hardware keylogger
- Technical environment: Windows, Delphi, C/C++, Octave

Visualpix *Bordeaux, France*

INTERNSHIP FOLLOWED BY A SOFTWARE ENGINEER CONTRACT *04/2002 - 12/2002*

- Improved a video compression codec by implementing a spatial index
- Technical environment: Linux, C

Glisshouse *Marseille, France*

BACKEND DEVELOPER, SYSTEM ADMINISTRATOR *07/2000 - 03/2001*

- Web: Maintained an online shop, developed a CMS
- System administration: Installed, setup and maintained the LAN
- Technical environment: Linux, Php, MySQL, Apache, Samba, cron

Education

2001 - 2002	**DESS Multimedia and Information Technology**, image synthesis and analysis, 3D geometry and rendering, sound, video	*Bordeaux university*
1999 - 2000	**Master in computer science**, image synthesis and analysis	*Poitiers university*
1998 - 1999	**B.S. in computer science**	*Limoges university*
1996 - 1997	**DEUG computer science and mathematics**	*Limoges university*
1995 - 1996	**Baccalauréat Science**	*Lycée Jean Giraudoux, Châteauroux*

Extracurricular Activity

Sports	Rock climbing, bike commuting, surf, trekking
Culture	Literature (classical, travel, adventure), cinema, attending rock concerts, guitar playing
Community commitments	Member of the direction comity of the rock climbing club of Rennes (2012 to 2016) Volunteered at concert venues of Rennes: Antipode (2011 to 2015), le Jardin Moderne (2009 to 2010) Volunteered to the music festivals Epipapu (2009, 2010) and la Route du Rock (2008 - 2018)
Travel	New-Zealand, Australia, USA, Canada, Malaysia, Bali, Bolivia, Iceland, Norway, Scotland, Faroe Islands