

Sergio Pérez Camacho

✉ brue@gmx.com
🌐 <https://brue.org>

About Software engineer with a strong focus on low-latency systems, algorithms, data processing, and real-time rendering. Experienced in system design and programming with an emphasis on performance, code correctness, and readability. Highly interested in security, general AI, and emerging technologies. Autonomous, self-driven, and committed to delivering high-quality solutions.

Education

2003 - 2010 **Computer Engineer**, *University of Castilla-La Mancha*
Final degree project awarded with honors.

Work Experience

2016 - **Senior Software Designer**, *Ericsson*, Madrid, Spain
Present

During my time in Packet Core, I have contributed to Deep Packet Inspection functionalities, including programming data structures, debugging and logging utilities, and traffic analysis features. Real-time reporting of traffic statistics and events has also been part of my responsibilities, along with requirements gathering, documentation, support, security, and concurrency management. I have driven the adoption of new C++ features and mentored other developers.

Awarded *Ericsson Key Contributor* for my primary contribution to optimizing TCP over radio connections. I designed and implemented key components of the functionality and conceived one of the algorithms successfully used during the second phase of the product. I remain an active member of the development and maintenance team.

Currently developing a new QUIC-based functionality to enhance security in mobile connections.

2011 - 2016 **Software Designer**, *Blue Telecom Consulting*, Madrid, Spain

SASN [2011-2013] Developed features and fixes for Ericsson's *Service Aware Support Node* product. Main contributions included *license management*, *low-latency event and statistics generation and serialization*, and general code maintenance.

DPI [2013-2019] Worked on *Deep Packet Inspection* and *Traffic Optimization* for Ericsson products. Developed multiple traffic analysis features, always prioritizing performance and low latency. Collaborated with a team of Ericsson engineers to develop functionality for optimizing TCP/IP connections over radio networks.

2011 - 2015 **Teacher**, *Master's Program in Video Game Programming*, University of Castilla-La Mancha

Taught classes on specialized data structures for 3D representation, modern C++, and serialization.

Authored chapters on these topics in books published from this course, which became bestsellers in their category on Amazon for several years.

- 2009 - 2011 **Technologist**, *University of Castilla-La Mancha*, Ciudad Real, Spain
- DEV Developed a tool for calculating positioning in a real-world environment and overlaying digital graphics (Augmented Reality). This state-of-the-art application used C++, OpenGL, and OpenCV.
- ADMIN System administration of Linux systems. Managed and maintained several services (web, DB, CVS, mail).

Certifications

- 2024 **BCSS - CNE Experienced Automation assessment**, *Ericsson*, Experienced Level in the CNE Automation Area.
- 2024 **BCSS - CNE Fundamental Automation assessment**, *Ericsson*, Fundamental Level in the CNE Automation Area.
- 2024 **Cloud Native Fundamental**, *Ericsson*, Provided to employees who have demonstrated sufficient Fundamental knowledge on Cloud Native critical skills through Fundamental Assessment.

Projects

- 2008 - 2010 **Hesperia**, *University of Castilla-La Mancha*, Ciudad Real, Spain, Hesperia developed a state-of-the-art technology in security, video surveillance, and operations monitoring for infrastructure and public spaces.

Publications

- 2012 **Desarrollo de Videojuegos.Programación Gráfica**, *Bubok*, Co-author
Video games development. Graphic programming.
- 2012 **Desarrollo de Videojuegos.Técnicas Avanzadas**, *Bubok*, Co-author
Video games development. Advanced techniques.

Languages

- Spanish Mother language
- English Advanced/Fluent

Interests/Hobbies

- Music Amateur musician and guitarist.
- Cinema Cinematography and color grading.
- Sports Healthy lifestyle.

Miscellaneous

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|-----------------------|---|------------|--|
| Programming Languages | C++, C, Python. Rust, Assembly, Delphi, C#, Objective C. | Networking | Internet Protocols , Wireshark |
| Virtualization | VirtualBox, VMWare, QEmu | Containers | Namespaces/CGroups, Docker |
| C.V.S. | Git | CI/CD | Gerrit, Jenkins, GitLab CI |
| Editors/IDEs | Emacs, CLion, VSCode | OS | GNU/Linux , Windows, OSX, Haiku |