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Professional Summary

Motivated third-year Informatics Engineering student specializing in low-level programming, embedded systems, and computer architecture. Proven experience in systems programming, IoT development, and hardware-software integration through hands-on projects. Demonstrated leadership as an active volunteer in Cruz Roja Juventud with multi-level council responsibilities. Strong collaborative skills developed through competitive programming (ICPC-SWERC) and team projects. Selected among Spain's top 200 pre-university students for academic excellence and leadership potential. Seeking opportunities to contribute to system-level software and embedded technology development.

Education

- **University of the Basque Country (UPV/EHU)** — Donostia, Spain
  B.Sc. in Informatics Engineering; Third-year student (Expected graduation: Jul 2027) — *Sep 2023 – Present*
  - **Technical Challenges & Collaboration**: Participated in the ICPC Southwestern Europe Regional Contest (SWERC), enjoying the opportunity to tackle complex algorithmic problems, collaborate with talented peers, and learn advanced problem-solving techniques in a challenging team environment.

- **Aldapeta María Ikastetxea** — Donostia, Spain
  High School Diploma in Science, with Honors (9.95/10.0) — *Sep 2021 – Jul 2023*

Supplementary education

- **Francisco de Vitoria University** — Madrid, Spain
  Program Becas Europa (Europe Scholarships) XVIII — *Mar 2022 – Feb 2023*
  - **Leadership Development**: Selected as one of the top 200 pre-university students in Spain, engaging in an intensive program designed to develop leadership skills through academic, political, and cultural experiences.
  - **Academic and Cultural Insights**: Attended conferences and met influential figures in Spain from various sectors, broadening academic and cultural horizons.
  - **Networking**: Connected with future leaders in Spain, expanding a network of talented and driven young professionals.

- **Huerta del Rey Centre for Psychology and Education** — Valladolid, Spain
  Summer Courses, recognized by the European Talent Support Network (ETSN) — *Jul 2011 – Jul 2023*
  - **Debates**: Developed critical thinking, persuasive communication, and adaptability through structured debates and public speaking.
  - **Robotics**: Acquired practical experience in programming, strengthened problem-solving skills, and fostered creativity through designing and optimizing robotic systems.

Technical Projects

- **Nintendo DS Game Development**: Engineered a complete Nintendo DS game using C and devkitPro toolchain. Implemented direct hardware manipulation, custom graphics rendering, sound processing, and dual-screen coordination. Gained deep expertise in embedded systems programming, memory-constrained environments, and hardware-specific optimizations.

- **Cache Memory Simulator**: Developed a comprehensive terminal-based Java application simulating L1 cache behavior with multiple replacement policies (LRU, FIFO, Random). Implemented detailed cache statistics tracking and performance analysis, demonstrating deep understanding of computer architecture, memory hierarchies, and system-level optimization.

- **Smart Home IoT Platform**: Architected and deployed a robust home automation ecosystem leveraging MQTT, wireless sensors, and microcontrollers. Demonstrated advanced networking skills by designing and securing a local network, implementing a dedicated VPN server for remote access, and configuring a custom DNS server to optimize device connectivity. Achieved seamless integration of diverse hardware interfaces (WiFi, Zigbee, Z-Wave), ensuring reliable and scalable communication across all smart devices.

- **Overnote - Software Engineering Project**: Collaborated in a 4-member agile development team to create a multiplatform note-taking application using JavaFX and Maven. Led implementation of secure user authentication with BCrypt hashing and rich text editing capabilities. Integrated AI-powered content generation (Google Gemini API), multilingual support (i18n), and persistent data storage with full CRUD operations. Applied software engineering best practices including code reviews, pair programming, and iterative development to deliver a production-ready application.

EXPERIENCE

- **Polymat**   Donostia, Spain
  Research Intern   *Jun 2022 – Aug 2022*
  - **Laboratory Research & Documentation**: Gained hands-on expertise in advanced laboratory protocols, ensuring accurate and efficient experimental procedures. Thoroughly documented research processes in lab notebooks, following best practices for scientific record-keeping and ensuring reproducibility of results.

- **Cruz Roja Juventud (Spanish Red Cross Youth)**   Donostia/Gipuzkoa, Spain
  Volunteer & Council Representative   *Sep 2022 – Present*
  - **Multi-Level Leadership & Strategic Planning**: Active member of Donostia Local Council and Gipuzkoa Provincial Council, with representation at national assemblies. Led strategic decision-making processes and coordinated youth volunteer activities across local, regional, and national levels. Spearheaded organizational initiatives and facilitated project planning sessions.
  - **Community Impact & Project Coordination**: Organized and managed social impact initiatives including toy and school supply drives, summer camps, and youth recreational programs. Developed strong project management, communication, and team coordination skills while engaging with diverse community groups across multiple organizational levels.

TECHNICAL SKILLS

- **Programming Languages**: C, C++, Assembly (basic), Java, Python (basic), Shell/Bash, SQL

- **Systems & Embedded**: Embedded Systems, Microcontrollers, Memory Management, Hardware Interfaces

- **Development Tools**: Git, GCC/Clang, Docker, Linux/Unix, OpenMP, Pthreads, devkitPro, Maven

- **Networks & Protocols**: MQTT, TCP/IP, VPN, DNS, Zigbee, Z-Wave, Wireless Communication

- **Specialized Areas**: Computer Architecture, IoT Development, System Optimization, Agile Development

LANGUAGES

English: C2 (Proficiency)   **Spanish**: Native   **French**: B2 (Intermediate)   **Basque**: Native

INTERESTS & ACTIVITIES

- **Technical Interests**: Embedded systems, computer architecture, firmware development, IoT platforms, cybersecurity

- **Personal Activities**: Hiking, volleyball, motorsport enthusiast (Formula 1), competitive video gaming, reading, music, traveling