Jonathan Armando Patiño

Computer Engineer

Highly motivated and self-driven Computer Engineering with a strong foundation in IT and a passion for continuous learning. Proficient in programming languages such as C, C++, Python, JavaScript, and Java, with hands-on experience in digital design, databases, and network simulation. Quick to adapt to new environments and conditions, with a focus on delivering efficient solutions. Proactive team player with a commitment to achieving project objectives. Currently residing in Germany and actively seeking full-time opportunities in the IT industry to contribute my expertise and technical skills.

Contact

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Work experience

Developer - Robust System and Circuit Lab | Universidad Nacional de Córdoba | Argentina | 2023 - current

In this role, I am involved in the development of microchips using open-source tools such as Openlane, Magic, Xschem, RiscV, SkyWater, Klayout, Icarus Verilog among others. The project is multidisciplinary, with one part of the team dedicated to designing an analog mix, and the other part responsible for chip testing. My specific focus lies in the chip testing phase, using the processor of architecture RISC-V.

Supervised Professional Practice - Digital Communications Lab | Universidad Nacional de Córdoba | Argentina | 2022 - 2023

Developing an application for multiple ADALM Pluto SDR boards to simulate radar objects. The project involves implementing controls for object size as observed by the radar and calculating distances obtained by the radar, and signal analysis with Python. The programming is carried out in Microlinux. To streamline the development process and accommodate multiple SDR boards, Docker and VPN technologies are utilized for efficient cross-compilation.

Technical Skills

- **Programming:** C, C++, Python, JavaScript, Java
- **Operating Systems:** Linux, Linux IIO, Windows
- **Digital Design:** Verilog, VLS
- **Databases:** MySQL, PostgreSQL, SQLite
- **Network Simulation:** GNS3, CCNA1
- **Build Tool:** Maven
- **Testing:** JUnit
- **Frontend:** HTML5, CSS3
- **Continuous Integration:** Jenkins, Circle CI, Git
- **Containers:** Docker
- **Numerical Computing:** Python
- **Web Framework:** Django
- **Applications:** Java FX
- **Software Design Pattern:** MVC, Observer Pattern
- **Embedded Systems:** PICs, ARMs, FPGAs, Raspberry Pi, Arduino
- **IT:** Software Licensing, Agile Methodologies, Workplace Health and Safety

Development Projects

- Java Video Game Application (JavaFX)
  - Developed a video game application in Java using JavaFX.
  - Implemented MVC architecture, continuous integration, version control, and automated tests with CircleCI.
  - Estimation of delivery times based on requirements, following Agile methodologies.
- Petri Nets Simulation
  - Created simulations for parking lot and factory scenarios using Petri Nets.
  - Managed concurrency with threads to simulate real-world scenarios.
- Internet Packet Traffic Simulation (C++)
  - Simulated internet packet traffic using C++.
  - Implemented path optimization algorithms such as Dijkstra's algorithm to optimize packet routing.
- Weather Central Automation
  - Automated a weather central using PICs (Programmable Integrated Circuits).
  - Utilized PICs to enhance the efficiency of weather-related processes.
- Laboratory Equipment Management Web Application
  - Developed a web application using Django (backend), JavaScript, HTML, CSS, Bootstrap (frontend).
  - Containerized the application with Docker for efficient management of laboratory equipment via Arduino.
- Microprocessor Integration with FPGA
  - Integrated knowledge of microprocessors using a Field-Programmable Gate Array (FPGA).
  - Developed a MIPS processor as a part of the integration process.

Education

Universidad Nacional de Córdoba - FCEFyN - Córdoba - Argentina

Diploma in Computer Engineering

- Intermediate degree: Bachelor in Computer Engineer obtained - Senior Thesis in System On Chip.

Languages

- **English:** Intermediate/Technical - Advanced
- **German:** Basic (Certified A2 - DAAD)
- **Spanish:** Native

Availability

- Open to relocation.
- Full-time