Daniel Sanchez Dominguez

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Experienced Software Engineer with over 3 years of specialization in backend development. Enthusiastic about mentoring and sharing knowledge with team members, I thrive in collaborative environments that encourage idea exchange. Possessing a research-oriented mindset, I am particularly drawn to abstract mathematics and functional programming.

Professional Experience

- **Blockchain Developer at CriptoMX** `(Jul 2023 - Jan 2024)`
  - Designed smart contracts in **Rust** for a liquidity staking protocol on the **VARA** network using the **GEAR** framework.
  - Successfully deployed in testnet and implemented a test suite.
- **Automation Project for RISTOC** `(Sep 2023 - Dec 2023)`
  - Led a project to automate an online automotive parts store.
  - Implemented backend logic in **Python** and utilized **PostgreSQL** for the database.
  - Integrated Shopify and automated workflows using **Zapier**.
- **Cybersecurity Toolchain Project** `(Mar 2023 - Jul 2023)`
  - Developed the foundation of a cybersecurity toolchain in **Rust** for **Ink!** smart contracts by analyzing the generated **WASM**.
  - Initiated the implementation of a fuzzer and a static analyzer.
- **Consultant Backend Developer at ABC Logistica** `Summer 2022`
  - Contracted to enhance an old codebase.
  - Wrote comprehensive documentation and refactored key modules.
  - Implemented tests in PHP using the Laravel framework.
  - Worked with **SQL** and **JavaScript/VUE**.
- **Embedded Software Engineer at John Deere** `(Jan 2022 - Dec 2022)`
  - Worked on embedded systems using **Linux**, **Python**, **C**, and **ARM**.
  - Designed and implemented a kernel driver for communication between a processor and a microprocessor through UART and the IOP protocol.
  - Developed a **Python** CLI app for booting only USBs with verified ISO images in Windows workstations.
  - Resolved build issues in Jenkins.
  - Implemented an RTOS module to convert CAN to Bluetooth LE.
  - Taught a series of courses on **Rust** for engineers in the organization.
  - Led a small team to implement a kernel driver in Rust as a proof of concept.

Academic Activities

- **Rust Instructor at Universidad de Chiapas** `(Feb 2024)`
  - Currently preparing material for a one-week course about **ICP** (Internet Computer Protocol) and smart contracts development.
- **Hackathon Cripto México Tijuana** `(Sep 2023)`
  - Developed a functional MVP of a **Liquidity Stake** using **Rust** smart contracts on the **VARA** network.
- **Rust Instructor at CryptoLatin Fest (Colombia)** `(Aug 2023)`
  - Conducted a workshop on **Rust** and **Ink!** smart contracts.
- **Rust Instructor at Univ. Iberoamericana** `(Jun 2023)`
  - Conducted a workshop on **Rust** and its core philosophy.
- **Member of the UANL team at the iGEM Competition (Boston, USA)** `(Mar 2019 - Nov 2019)`
  - Worked in a team designing a genetically engineered bacteria for digesting toxic compounds.
  - Used Python for numerical simulations and cluster computing.
  - Created an online wiki to document the project.

Education

- **Polkadot Blockchain Academy by Parity (BA, Argentina)** `(Jan 2023 - Feb 2023)`
  - Completed a research-oriented course working with core libraries of the **Substrate** framework in **Rust**.
  - Learned how to use **RPC** calls for the Polkadot Blockchain.
- **Plutus Pioneers 3rd Cohort** `(Spring 2022)`
  - Completed a hands-on course using **Haskell** to learn about the Cardano Blockchain and Smart Contracts development.
- **The Coding School's "Qubit by Qubit" by IBM** `(Autumn 2020 - Summer 2021)`
  - Completed a two-semester Quantum Computing course using **Python** and the Qiskit quantum framework.
  - Learned to operate with quantum gates and braket notation.
- **Biotechnology for Cyanobacteria and Microalgae at FCB-UANL** `(Sep 2019)`
  - Hands-on workshop aimed to learn how to extract microalgae, cultivate cyanobacteria and count organisms under a microscope.
- **Biotechnology Applied to Molecular Biomedicine at CIDEB-UANL** `(Jun 2019 - Jul 2019)`
  - Hands-on course to learn DNA extraction techniques, protein purification, and identification of diseases through molecular techniques.
- **University Studies as Network Engineer at UANL** `(2018 - 2022)`
  - Focused on systems programming and embedded development.
  - Learned networking automation with **Python** and **Cisco**

Highlights

- Languages: **Native** Spanish, **C1** English, **A2** French
- Developing: `Rust`, `Python`, `C`, `Linux/Bash`
- Possess a valid **American VISA** and **Passport**, **ready to travel**