

**Juan Diego Figari**  
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## Summary

Intermediate Computer Science student at UBA with a systems-oriented focus. Experience designing and implementing event-driven servers in C, REST APIs in Go, and functional programs in Haskell and Prolog. Strong emphasis on explicit protocol design, state ownership, and incremental, correctness-first development on Linux.

## Skills

- **Languages:** C, Go, Python, Haskell, Prolog, Java (light), JavaScript, HTML/CSS
- **Systems / Concepts:** UNIX domain sockets, TCP fundamentals, `select()`, event-driven I/O, protocol framing, client-server architectures, explicit state ownership
- **Tools / Misc:** Linux, Bash, Git, Valgrind, GDB, QEMU, PostgreSQL, CURL, basic scripting and automation, security wargames (OverTheWire)
- **Areas:** Algorithms, data structures, systems programming, OOP, functional & logic programming

## Projects

**Event-Driven Chat Server in C** 2025

[GitHub Repository](#)

- Single-process, single-threaded, multi-client chat server using UNIX domain sockets (`AF_UNIX`, `SOCK_STREAM`) with `select()`.
- Layered protocol: framing, grammar, execution; explicit state ownership and deterministic transitions.
- Incremental, auditable design prioritizing correctness and debuggability.

**REST API To-Do Server in Go** 2025

[GitHub Repository](#)

- REST endpoints with basic authentication, PostgreSQL integration, and `curl`-based testing.
- Early Go project focused on learning the language, standard library usage, and backend API structure.

**Functional & Logic Programming Work** 2025

[GitHub Repository](#)

- Haskell & Prolog exercises: recursive structures, type-safe functional patterns, logic-based problem solving.
- Introduced to commit conventions and basic TDD practices.

## Education

**Bachelor in Computer Science** — University of Buenos Aires, in progress (53% completed)  
**Bilingual High School (Science & Computer Focus)** — Liceo Franco Argentino Jean Mermoz

## **Languages**

- Spanish: Native
- English: Advanced
- French: Advanced

## **Experience**

### **McDonald's - Arcos Dorados S.A.**

2023-2024

- Customer service, cash handling, end-of-day closing; recognized as standout performer.

### **Piano Instructor (freelance)**

2021-2025

- Private lessons and autonomous student management.