Juan Ignacio Raggio

Buenos Aires, Argentina · GitHub · LinkedIn

Profile

Back-end developer with a passion for computer simulations, quantitative finance and optimization. Strong background in Java, C/C++ and Python, with experience in mathematical modeling, statistical analysis, and development of visual and algorithmic tools. Computer Engineering student at Instituto Tecnológico de Buenos Aires.

Projects

Clicking project name sends you to github

- **Probabilidad (Typst):** Collection of probability and statistics problems solved in LaTeX, covering theory and university-level exercises.
- **TI84Programs (Python/MicroPython):** Math and statistics programs for TI-84 calculator, focused on data analysis, simulations and combinatorial calculations.
- **Querying 100M Tickets from USA cities:** Single-threaded program who extracts data from a CSV file and implements nested AVL-Tree from scratch to optimize RunTime
- **API Data Extraction and Processing**: Integrated data from REST APIs, performed transformations and queries on XML data using XQuery and XSLT. Automated processing and reporting into a pdf
- **Fluid Simulation:** Interactive 2D fluid simulation using C and SDL2.
- **Math Simulation - Conway's Game of Life:** Interactive mathematical simulation using C++ and SDL2.
- **Live Structure Visualizer**: Using C++ and Qt to build a Data Structure Visualizer. Work in progress...

Education

- **Computer Engineering** – Instituto Tecnológico de Buenos Aires
- **Natural Sciences** – Balmoral College

Certificates

- First Certificate in English – Cambridge
- ICE – Cambridge (Physics, Mathematics, Biology, Environmental Management, Language, Literature)
- Fat Chance: Probability from the Ground Up – Harvard University

Languages

- Spanish – Native
- English – Advanced
- French – Basic
- German – Basic

Technical Skills

- C/C++ (Modern, STL, Multithreading)
- Qt (widgets, signals/slots, GUI design)
- Java (JUnit5, Maven)
- Ruby (Meta programming)
- Python (statistics, simulation, MicroPython)
- SDL2
- XML (XQuery, XSLT)
- Bash, Lua, Elisp
- Typst, LaTeX