EZEQUIEL **MUNDANI VEGEGA**

Software Engineering Student

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EDUCATION

Computer Engineering (Current, 98% done):
Facultad de Ingeniería, UBA **2021-Today**

Electronic Engineering (70% done):
Facultad de Ingeniería, UBA **2017-2021**

High School:
Colegio Nacional de Buenos Aires **2011-2015**

Elementary School:
Colegio Euskal Echea **2004-2010**

LANGUAGE SKILLS

Spanish: Native

English: Advanced (C1)
Score: 186/190
Ref No: 175AR6022514

French: Basic

TECHNICAL SKILLS

- Programming languages:
  Python, Ruby, C, C++, Rust, Java, Typescript, AVR Assembly, HTML, CSS, Mathlab.
- Database management:
  PostgreSQL, MongoDB, Neo4j.
- Version control systems:
  git, GitHub, GitLab.
- Machine learning algorithms:
  used scikit-learn and TensorFlow.
- Agile programming:
  Extreme programming, Scrum, BDD with Gherkin.
- Experience with UNIX-based OS and Windows.
- LaTeX and Office package.
- Other software technologies:
  Angular, Pandas, Autocad, LTSpice, Octave.

TEACHING

Since February 2020, I have been a private tutor for high school and university students in mathematics, physics, and chemistry.

Since August 2024, I have been a Teaching Assistant for the course “Networks” at FIUBA.

KEY PROJECTS

Marketplace with Appointment Scheduling and Metrics Analysis for Cultivando Conocimiento:

- Implemented the backend as microservices using Ruby and Sinatra, enabling modular and scalable architecture.
- Designed the frontend using Angular to create a responsive and user-friendly interface.
- Utilized SQL databases for efficient data storage and management.
- Integrated Firebase cloud services for storing large files and images.
- Ensured seamless communication between frontend and backend through RESTful APIs.
- Managed group coordination through GitHub Projects, effectively assigning user stories and tracking progress.
- Set up continuous integration and continuous deployment (CI/CD) pipelines to automate testing and deployment processes.

Reliable File Transfer Protocol over UDP:

- Designed and implemented a multithreaded server capable of managing multiple simultaneous connections and clients.
- Employed socket programming to establish communication between the server and clients, handling connection requests efficiently.
- Implemented mechanisms for error detection and correction to guarantee the integrity of file transfers.
- Utilized Wireshark to verify and analyze the protocol's behavior during data transmission.

Hotel Booking Cancellation Prediction Model and Film Review Sentiment Analysis:

- Trained and evaluated multiple machine learning models, using classification algorithms such as decision trees, KNN, SVM, Random Forest, XGBoost, and ensemble methods (Scikit learn), as well as neural networks (Keras/TensorFlow).
- Utilized Pandas for data preprocessing and visualization of the dataset.

Custom Media Streaming REST API with Telegram Bot Interface:

- Built with Sinatra for the API framework, utilizing SQL for data persistence
- Both were deployed independently and communicated via HTTP.
- Managed group coordination through GitLab Issue Board, effectively assigning user stories and tracking progress.

MQTT Platform:

- Developed in Rust utilizing a Client/Server architecture, the server was multithreaded.
- The MQTT Protocol was implemented from scratch.

Kahoot-like app:

- Developed in Java utilizing MVC architecture.

DFT calculator:

- Developed in C++, computes the discrete and fast Fourier Transform (DFT and FFT).

Morse code decoder:

- Software for decoding, transmitting and printing developed in Assembly.
- Hardware built with AVR microcontroller and other components.