Emmanuel Gomez O

Last Semester Computer Engineering Student

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TECHNICAL SKILLS

Languages: Spanish (L1), French & English (L2).

Programming: Python, C, C++, Matlab, fullstack JavaScript.

Electronics and Physics: Experience with electrical equipment for circuit analysis, with simulation/design software such as SPICE(Ng/LT/pOrcad), VHDL, KiCad, OpenModelica, experience making Arduino, FPGA and Raspi projects, network simulations(packet tracer), Real-time systems (Xenomai) and using artificial vision. Also knowledge on Gmsh+Elmer+ParaView (FEM simulations), and quantum computing algorithms (Experience with IBMq).

Video and Others: GIMP, Inkscape, KdenLive, Sketchup, Libreoffice/Msoffice, Latex, Vim, Unix-like terminals, Git.

Computer Opertative Systems: Linux-like and Windows.

Typing Speed: 80 wpm.

Soft Skills: self-education, curiosity, passion for learning, solving problems, teaching.

INDUSTRY AND ACADEMIC EXPERIENCE

Undergraduate Research Assistant
Group of Primary Immunodeficiencies (GIDP) (UdeA)

May 2020 – May 2022
Sede de Investigación Universitaria

- Centralized storage server with a **NAS** station for medical research (fullstack system using **nginx**, **node**, **mysql**)
- Library for exome tri-way **data analysis** intended for exomes, named **trio** 🔗

Research Team Member
Group of Power Electronics and Robot Automation (GEPAR)(UdeA)

May 2018 – May 2019
Universidad de Antioquia

- Software register (13-75-191 SIC Colombia) of **maglib** using **Python**, **Gmsh**, **Elmer** and **ParaView** (automatic launcher for magnetic simulator) (co-autor)
- Studies on **magnetic levitation**, **control systems** and **FEM** simulations

Projects

- Chess games recorder to PGN, based on **artificial vision**, **Ress** 🔗 (co-autor)
- Digital, Analog and Ideal **filter bank** directed to audio/one-dimensional **signals**, **Filterviz** 🔗 (co-autor)
- Template of **server** to play table games that need a timer to cycle through every player on a local network using **websockets** on **node**, **LanTimerApp** 🔗

SOCIAL WORK, SPORTS AND INTERESTS

Teaching experience in 3 languages on undergraduate and high school **math**, **physics**, **digital systems** and **analog electronics**.

High School **Literacy work** on teaching **French** to older men at the institution Hogar de Cristo Cali (Nuestra Señora de la Esperanza) (Nursing Home).

Colab with my father on the fabric of furniture and **security doors**, **house remodeling** and **welding**.

Martial arts (Taekwondo, Hapkido, Jiu-Jitsu), Swimming, Soccer and Basketball.

Drawing, Music (guitar, piano and voice), Dance. Basic knowledge on music theory and passionate about its relationship with subjects such as physics and signals processing.

Social interaction on Omegle and online meetings (with native speakers) in order to improve conversational **English**.

EDUCATION

University of Antioquia
B.Sc in Computer Engineering with emphasis on Digital Electronics

Medellín, Antioquia
Fall 2016 – Present

High School
Colegio el Bosque - Corporación Colegio Nuestra Señora de la Esperanza

Yumbo, Valle del Cauca
finished on Spring 2016

Elementary School
Licée Français Paul Valéry

Cali, Valle del Cauca
finished on Spring 2012