

# Emmanuel Gomez O

Last Semester Computer Engineering Student

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## TECHNICAL SKILLS

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**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. Gmsh+Elmer+ParaView (FEM simulations), and knowledge on quantum computing (IBMQ)

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

**Computer Operative Systems:** Linux-like and Windows

**Typing Speed:** 80 wpm

## INDUSTRY AND ACADEMIC EXPERIENCE

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### Undergraduate Research Assistant

May 2020 – May 2022

*Group of Primary Immunodeficiencies (GIDP) (UdeA)*

*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** ♂

### Undergraduate Research Assistant

May 2018 – May 2019

*Group of Power Electronics and Robot Automation (GEPAR)(UdeA)*

*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

## SOCIAL WORK, SPORTS AND INTERESTS

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High School **Literacy work** on **French** teaching to older man 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

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### University of Antioquia

Medellín, Antioquia

*B.Sc in Computer Engineering with emphasis on Digital Electronics*

*Fall 2016 – Present*

### High School

Yumbo, Valle del Cauca

*Colegio el Bosque - Corporación Colegio Nuestra Señora de la Esperanza*

*finished on Spring 2016*

### Elementary School

Cali, Valle del Cauca

*Licée Français Paul Valéry*

*finished on Spring 2012*