

Jesus Manuel Vergara

You can view the online version of this document by clicking [here](#), where you can find more about me and other projects: [online version](#)

ABOUT ME

Hello, i am Jesus Manuel Vergara

I'm a Mechatronics Engineer with a strong background in CAD/CIM/CAM development. With two years of experience using CAD software such as SolidWorks, AutoCAD, and Onshape, I've honed my skills in creating precise and efficient designs.

In addition to my engineering expertise, I have two years of experience in web product development, specializing in technologies like React.js, React Native, Django, JavaScript, TypeScript, and Python. My passion for Python has driven my journey into data science as I enjoy how theory is intertwined with real-world applications to generate insights and solutions.



Spanish | Native

English | B2+

German | B1



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Home: México

SKILLS

Mechanical Design

| Software | Proficiency |
|------------|-------------|
| SolidWorks | 100% |
| AutoCad | 100% |
| Onshape | 80% |

Data Science

| Language/Tool | Proficiency |
|---------------|-------------|
| Python | 90% |
| Numpy | 80% |
| Pandas | 80% |
| Matplotlib | 60% |

Soft skills

| | |
|---------------|-----------------|
| Communication | Leadership |
| Teamwork | Problem-solving |
| Adaptability | |

Programming

| Language/Tools | Proficiency |
|-----------------|-------------|
| Python | 90% |
| JavaScript | 90% |
| Django | 80% |
| Django API rest | 70% |
| TypeScript | 80% |
| React.js | 90% |
| React Native | 70% |
| Arduino | 70% |
| WordPress | 60% |
| Docker | 80% |
| PostgreSQL | 70% |

Project management

| Software | Proficiency |
|------------|-------------|
| MS Project | 90% |
| Office 360 | 90% |

WORK EXPERIENCE

Software Engineer | Freelance

Currently working on a CRM management tool for Roco Global, focused on handling and managing inventory.

Current

Data Science - Junior | Freelance

As a junior data scientist, I have worked with various datasets, extracting valuable insights to analyze sales trends, population data, and more.

Apr/2024 - Current

Projects:

- [Ecommerce Dataset for Data Analysis](#)
- [Popular programming languages](#)
- [Retail project](#)
- [COVID statistics](#)

Software Design Engineer - Junior | Barmex Energy - Bogotá, Colombia

As a S.D.E. my main responsibility was to develop custom web pages, adhering to designs provided and using technologies like React. Additionally, I managed code versions using tools like Git and performed CRUD (Create, Read, Update, Delete) operations to ensure application functionality. I worked efficiently under pressure to meet deadlines and deliver high-quality products in a dynamic and demanding environment.

Jan/2022 - Nov/2023

English teacher | Institución Universitaria de Barranquilla

As an English teacher, my goal was to teach the language in engaging, practical ways despite limited resources. My students came from vulnerable social groups with limited access to education, educational infrastructure, economic opportunities, and were often affected by localized violence.

Feb/2023 - May/2023

Resolution:

[Link to resolution](#)

Mechatronics Design Engineer | Barmex Energy - Bogotá, Colombia

Led the project "Design and Construction of a Device for Obtaining Three-Dimensional Coordinates on Different Topographic Surfaces Through the Use of Wireless Networks, GPS, and Altimeter". The main objective was to design and construct a system for obtaining three-dimensional coordinates using wireless networks, GPS, and digital altimeters.

Jun/2020 - Dec/2021

Documents of the initial prototype:

[Link to Prototype](#)

Publication:

[Link to Publication](#)

Mechatronics designer - Junior | Barmex Energy - Bogotá, Colombia

Design and construction of an automatic granulometer prototype for soil sieving. The main objective of this project was to design, build, and test a mechanical system for grain separation by area size using SolidWorks software. Programming was developed in Arduino, and the prototype was materialized through 3D printing.

Jun/2020 - Dec/2021

Documents of the initial prototype:

My main role was:

- Mechanical design in CAD software.
- Software design

Software & hardware:

- **Python.**
- Raspberry PI.

Documents of the initial prototype:

[Link to Prototype Document](#)

[Link to Prototype Document](#)

Academic Monitor | Institución Universitaria de Barranquilla - previously called: ITSA

As an academic monitor, I was responsible for reinforcing knowledge in the following subjects:

Feb/2020 - May/2020

- Differential Calculus
- Integral Calculus
- Multivariable Calculus
- Differential Equations
- Algebra and Mathematics
- Strength of Materials
- Statics
- Mechanical Physics
- Electrical Physics
- Waves and Heat
- Statistics

Resolution:

[Link to resolution](#)

Mechatronics designer - Junior | Barmex Energy - Bogotá, Colombia

The BarmexApp project, a web application designed to generate budgets for photovoltaic installations using only the monthly electricity bill. Our platform simplifies the process of calculating the cost, allowing users to make informed decisions about the implementation of photovoltaic systems.

Jun/2020 - Dec/2021

Features:

- **Invoice Analysis:** Enter simple data from your monthly electricity bill into our platform to start the analysis.
- **Budget Generation:** Get a detailed budget for the installation of a photovoltaic system based on your monthly electricity consumption.
- **Customization of Configurations:** Customize the characteristics of the photovoltaic system, such as capacity and location, to obtain accurate estimates.

EDUCATION

[Mechatronics engineer.](#)

[Other courses.](#)

[Online version.](#)