Julian Vanegas

+57 3153246326 | vanegas2001@gmail.com | linkedin.com/in/juliancvg | github.com/Julian200110

Education

Universidad Militar Nueva Granada
Mechatronics Engineering — *Jan. 2019 – Apr. 2025*

Cymetria
Cloud computing — *Sep. 2024 – Dec. 2024*

Oracle Next Education
Beginner Programming Training / Front End Training / React Training — *May. 2023 – Dec. 2023*

Universidad de Antioquia
Programming skills training program with emphasis on mobile application development. — *May. 2021 – Dec. 2021*

Experience

Website Administrator — Jun. 2020 – Present
Fundación Artística y Cultural Talentos - Freelancer
- Maintenance and updating of WordPress website.
- Generation of necessary reports for the entity, organization and analysis of information, management of the different institutional platforms.

Front End web developer — Sep. 2023 – Jan. 2025
Standard Salud - Freelancer
- Development of interactive web interfaces using React.js, ensuring a smooth and efficient user experience.
- Implementation of reusable components and code performance optimization.
- Integration of RESTful services and external APIs to enhance communication between frontend and backend.
- Execution of unit testing with Jest / React Testing Library to ensure code quality.
- Utilization of Git and platforms like GitHub for version control, working under agile methodologies.

Engineering Intern — Dec. 2023 – Dec. 2024
Slb
- Engineering Intern in the ALS (Artificial Lift Solutions) Area.
- Data analysis and visualization using Power BI to support decision-making.
- Participation in the Quality Control Process (QCP), ensuring standards during assembly phases.
- Development of CAD designs for technical and operational projects.
- Participation in the Dismantle, Inspection, and Failure Analysis (DIFA) process for ESP equipment.

Projects

Brewery Plant Simulation | *C, Unity, TIA PORTAL*
- Design and development of a brewery plant simulation using Unity.
- Integration with a Siemens S7-1500 PLC for real-time process control.
- Simulates brewing operations, enabling interaction between virtual and physical systems.
- Bridges automation processes with digital environments for enhanced efficiency.

Conveyor Belt System | *C, Javascript, React, Node.js*
- Developed using Arduino, integrated with a server for remote monitoring.
- Web interface designed with React and Next.js for real-time data visualization.
- Enables control and supervision of the conveyor belt through the web platform.

Weed-Removing Robot for Vegetable Gardens | *C, Dart, MATLAB, Solidworks*
- Implementation of artificial intelligence to identify weeds through camera vision.
- Mechanical design of different components to ensure durability across different terrains.
- Development of tools for weed removal without causing damage to the crops.
- Remote control operation using an ESP32 board and an application developed in Flutter.

Empty Chair Detection Application | *MATLAB, Python*
- Artificial Intelligence algorithm using region-based convolutional neural network (R-CNN) training developed in MATLAB.

Technical Skills

Languages: JavaScript, TypeScript, HTML/CSS, Java, Python, C/C++, SQL, PHP, MATLAB, Go, Kotlin, .NET
Frameworks: React, Node.js, Next.js, Vue, Angular, Django
Developer Tools: Git, AWS, VS Code, Visual Studio, PyCharm, NetBeans, MongoDB, MySQL, Power Bi, Power Apps, PostMan, Android Studio, WordPress
Libraries: NumPy, Matplotlib, Pandas, Bootstrap, CoreUI

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