

Manuel Piña Olivas

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SUMMARY

Passionate Mechatronics Engineer with background in computer vision, embedded systems, automation, full-stack development, mechanics, and robotics. Proficient in Python and low level programming languages such as C++, C, and Rust. Focused on problem-solving, research, and collaboration. Seeking a challenging role to develop my skills in a dynamic environment.

EXPERIENCE

FEEN Industrial Maintenance

Nov 2019 – Apr 2020
Ciudad Juárez, MX

- Lathe and Milling Machine operation.
- Arduino programming for industrial automation.
- Troubleshooting and repair of electrical and mechanical systems.
- PLC Panel Cable Management, and Maintenance of Industrial Machines.
- Computer maintenance and repair (software installation, hardware replacement).

Vimonsa

Maintenance

Jun 2023 – Dec 2023
Ciudad Juárez, MX

- TIA Portal Programming for PLCs, panel cable management.
- Quality measurement and task registration and documentation.
- Haas CNC Machine Maintenance, operation, calibration and troubleshooting.
- 3D Modeling, blueprint interpretation, and CNC Programming with SolidWorks and Fusion 360.

Hagenteck Solution

IT Engineer

Sep 2024 – Present
Ciudad Juárez, MX

- Implemented traceability systems, improving visibility and reducing errors by 15%.
- Software Engineer developer with a focus on process automation and IoT solutions.
- Developed PLC programs in Structured Text (TwinCAT 3), boosting production efficiency by 25%.
- Designed and deployed servers and databases, ensuring high availability and scalability for critical systems.
- Delivered full-stack development solutions, front-end and back-end development, and database management.

TECHNICAL SKILLS

- | | | | | |
|----------|----------------|-----------------|---------------|--------------|
| • Python | • SQL | • Simulink | • TwinCAT 3 | • AutoCAD |
| • C++ | • JavaScript | • Docker | • TIA Portal | • Fusion 360 |
| • C | • HTML / CSS | • Visual Studio | • RSLogix 500 | • Office |
| • C# | • Git / Github | • MPLAB X IDE | • LabVIEW | • Windows |
| • Rust | • MATLAB | • PLC | • SolidWorks | • Linux |

TOOLS

Measurement Instruments: Vernier Caliper, Micrometer, Optical Comparator, Oscilloscope, Multimeter.

Machines: Lathe Machine, Milling Machine, Welding Machine. Haas VF2, VF4 and ST-10.

EDUCATION

Universidad Autónoma de Ciudad Juárez

Bachelor's in Mechatronics Engineering

Aug 2020 – Present
Ciudad Juárez, MX

CBTIS 128

Administrative Technician

Aug 2017 – May 2020
Ciudad Juárez, MX

PERSONAL PROJECTS

Object Detection

Computer Vision Project

Jan 2023 – Nov 2023
Python, YoloV8, OpenCV.

- Developed an end-to-end system for object detection – Github.

Portfolio

Web Developing Project

Aug 2024 – Sep 2024
HTML / CSS, JavaScript, React.

- Designed and developed a responsive personal portfolio website showcasing projects and skills, using React for dynamic components and modern UI design principles – Github.

Omnidirectional Robot

Robotics Project

Oct 2024 – Present
ROS, Python, C++, Gazebo.

- Designed and implemented an omnidirectional robot with autonomous navigation capabilities, leveraging ROS for control systems, OpenCV for vision processing, and Gazebo for simulation – Github.

Industrial Traceability

IoT Project

Nov 2024 – Present
Twincat 3, Structured Text, PLC.

- Created a comprehensive tutorial for implementing IoT-based traceability solutions using TwinCAT 3 and Structured Text, enabling real-time production monitoring and data logging – Github.

CERTIFICATIONS

- Solidworks - CSWA Certificate.
- Codecademy - Fullstack Developer Certificate.
- Coursera - Meta Fullstack Developer Certificate.

LANGUAGES

English

Spanish

C1 - Advanced
Native