Manuel Piña Olivas

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SUMMARY

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

WORK EXPERIENCE

CFE   Jun 2025 – Present
Intern   *Ciudad Juárez, MX*

- Created a Telegram bot for automated data retrieval, processing, and reporting.
- Designed and implemented deep learning solutions for complex data processing and analysis.
- Automated data processing workflows using Python, reducing manual effort and minimizing errors.
- Developed predictive models for task automation, leveraging machine learning techniques to improve operational efficiency.

Hagenteck Solution   Sep 2024 – Present
IT Engineer   *Ciudad Juárez, MX*

- Implemented traceability systems, improving visibility and reducing errors.
- Software Engineer developer with a focus on process automation and IoT solutions.
- Developed PLC programs in Structured Text (TwinCAT 3), boosting production efficiency.
- 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.

Vimonsa   Jun 2023 – Dec 2023
Maintenance   *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.

FEEN Industrial   Nov 2019 – Apr 2020
Maintenance   *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).

TECHNICAL SKILLS

C	Visual Basic	Node.js	MATLAB	LabVIEW
C++	JavaScript	Three.js	Simulink	SolidWorks
C#	HTML	MSSQL	ROS2	Fusion 360
Python	CSS	PostgreSQL	TwinCAT 3	MPLAB X IDE
Rust	React	SQLite	TIA Portal	Windows
Go	Angular	Docker	Studio 5000	Linux
ST	Vite	GitHub	RSLogix 500	Office

TOOLS

- Vernier Caliper.
- Micrometer.
- Optical Comparator.
- Oscilloscope.
- Multimeter.
- Lathe Machine.
- Milling Machine.
- Haas VF4.
- Haas ST-10.

EDUCATION

Universidad Autónoma de Ciudad Juárez   Aug 2020 – Present
Bachelor's in Mechatronics Engineering   *Ciudad Juárez, MX*

CBTIS 128   Aug 2017 – May 2020
Administrative Technician   *Ciudad Juárez, MX*

PERSONAL PROJECTS

Interactive Portfolio   Apr 2025
Web Developing Project   *HTML / CSS, JavaScript, React, Vite, Three.js*

• Developed an interactive 3D portfolio using Three.js and React Three Fiber, showcasing projects within a dynamic web environment built with React and Vite. — Website.

Industrial Traceability   Nov 2024 – Present
IoT Project   *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.

Omnidirectional Manipulator Robot   Jan 2025 – Present
Robotics Project   *ROS2, Linux, Python, C++, SolidWorks.*

• Designed and implemented an omnidirectional manipulator robot with autonomous navigation using ROS2 for control, Gazebo and Rviz2 for simulation — Github.

CERTIFICATIONS AND COURSES

• Solidworks - CSWA Certificate.

• Meta - Version Control Certificate.

• Codecademy - Fullstack Developer Certificate *(in progress)*.

• Codecademy - C Programming Certificate.

• UACJ - TOEFL ITP *(Score: 553)*.

LANGUAGES

English   Advanced
Spanish   *Native*