JACOB TINOCO

MECHATRONICS ENGINEER

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BACKGROUND

Programmer with 3 years of experience in Python and C++. Proficient in individual and team environments, with research experience in Artificial Intelligence and Computer Vision. Used tools such as Amazon Alexa Skills, OpenCV, Ollama, Mediapipe, and TensorFlow, Numpy, Matplot. Skilled in social communication, interpersonal development, and remote work. Highly responsible, self-taught, and a team player with a keen interest in artistic, philosophical and scientific knowledge.

EDUCATION

Bachelor´s Degree in Mechatronics Engineering: Speciality in Process Automatitation. **Computer Science Technician**, Specialty in computer science. **Awards:** 1st: Introduction to Artificial Intelligence with Artificial Neural Networks (ANN), 2019. 3rd: Development and implementation of security systems using home automation, 2019.

Relevant courses:

- Data Analysis with R Programming by Google
- Ask Questions to Make Data-Driven Decisions by Google
- Prepare Data for Exploration by Google
- Process Data from Dirty to Clean by Google
- Practical Python for AI coding 1 by KAIST
- Analyze Data to Answer Questions by Google
- Share Data Through the Art of Visualization by Google

EXPERIENCE

IMPLEMENTATION OF 3 LEAP MOTION CONTROLLER DEVICES ON ONE COMPUTER | PROGRAMMER

Querétaro, Mx, 2023 – 2024

In this project, I performed the development of 13 static gesture tracking algorithms using three LMC (Leap Motion Controller). Implementing programming skills in Python, (mastering libraries such as: Pandas, NumPy, matplotlib), for data processing, and use of C++ language to program such sensors, mastering in C++ the Leap Motion API for developers. By combining three sensors, the field of view is enlarged by 266% and the reading confidence is increased by 12%. Perform additional activities of documenting my processes, weekly reports and monthly reports, working as a team through effective communication in weekly meetings and constant communication with team members.

GESTURE AND HUMAN IDENTIFICATION AND TRACKING | DEVELOPER

Querétaro, Mx, 2024 – 2025

I developed Backend skills such as version control, creating my own API's and understanding third party API's, analytical thinking, project organization, problem solving and identification skills, scalable project capabilities. I made use of my mastery in Python with the following libraries: OpenCV, Numpy, Pandas, YOLO in its versions V3, V5, V11; I also developed skills in the use of Tensorflow, Keras. The goal is to develop an algorithm that allows the identification and tracking of gestures and people in real
real time and then take it to LSM interpretation.

AI, CHAT-BASED VIRTUAL ASSISTANT GPT FOR DEV'S. | DEVELOPER

Estado de México, Mx, 2024 – 2025

This project focuses on the development of a virtual assistant based on Chat GPT, using open source models provided by Ollama. I implemented the languages Pyhton, for the internal programming of the application, javascript for the graphical interface. I learned to use Django and Flask to create my API's, NLTK and SpaCy for NLP processing and text analysis. I used the Ollama developer documentation and implemented the PythonCoder V2 model. Along the way I improved my project documentation skills, developed my testing and validation skills and adapted to new tools.

SKILLS AND ABILITIES

- Artificial Intelligence
- Artificial Vision
- Chatbots development
- Version control.
- Adaptation of new tools.
- Data
- C++
- Python
- Numpy
- Tensorflow
- OpenCV
- Matplotlib
- English: B2
- French: A1
- Italian: A2
- Self-learning.
- Continuing education.
- Self-taught
- Teamwork.
- Employee relations.
- Analytical Thinking
- Critical Thinking
- Empathy
- Effective communication
- Data analysis with excel
- Data analysis with R
- Data analysis with Python
- Machinne learning
- Deep learning
- Data visualization