Pedro Morales

714-574−2219 | pedrojmorales01@gmail.com | github.com/pmorales01

EDUCATION

California State University Fullerton	Cumulative GPA: 3.97
Bachelor of Science in Computer Science	August 2020 – December 2023
Honors: Summa Cum Laude, Dean's Honor List:	Fall 2020−Fall 2023

2023 ECS Student Project Innovation Expo Finalist	Cal State University Fullerton, CA

- Finalist in CSUF's prestigious Engineering and Computer Science Student Project competition, demonstrating exceptional innovation and project quality for Titan Rover.

EXPERIENCE

Property Management Assistant	March 2022 – March 2024
LPG LLC	*Santa Ana, CA*

- Implemented cost-effective decisions in real-time while coordinating maintenance tasks with technicians, resulting in increased efficiency and long-term savings.
- Presented units to prospective tenants, offering accurate and relevant information to impromptu questions, and referred individuals to management for inquiries requiring additional assistance.
- Managed spare keys to units, granting access to authorized personnel and tenants only, ensuring property remained secure.
- Communicated with tenants regularly to address any issues or provide updates as required by management.
- Actively addressed tenant complaints and concerns, and appropriately directed them to management when necessary.

Computer Repair Technician Intern	August 2019 − December 2019
Santa Ana Unified School District Technology Innovation Services	*Santa Ana, CA*

- Diagnosed and repaired broken screens, trackpads, keyboards, and batteries of Chromebooks.
- Prepared and installed new copies of Windows OS and Chrome OS.
- Managed Chromebook inventory in Microsoft Excel, tracking the originating school and destination for each device.

PROJECTS

Titan Rover | *Python | ROS | Linux*

- Used ROS (Robot Operating System) to develop ROS nodes that detect ARUCO tags and subscribe to topics to retrieve messages, which were used to create and send navigation goals for a mock Mars rover to move in its environment.
- Tested and validated ROS code on a rover platform, collaborating closely with the development team to identify and troubleshoot issues during integration and testing phases.
- Used Python to design code to work with services, publishers, ROS nodes, callback functions, and decoupling functions.
- Ensured seamless integration of interdependent code into existing codebase and wrote documentation for future teams.

E-commerce Website – Full Stack Web Application | *HTML | CSS | JavaScript | React | Python | MongoDB | Next.js | Tailwind CSS | Pydantic | FastAPI | JWT | Postman*

- Implemented a responsive frontend using asynchronous programming with React and stylized it with TailwindCSS.
- Designed a RESTful API with FastAPI and used Pydantic models to validate data received from requests, authenticate user login, handle registration, image uploads, forms, and create protected routes.
- Integrated MongoDB into the application's backend to facilitate CRUD operations for authenticated users.
- Tested API endpoints using Postman, ensuring functionality and data consistency with Pydantic models.

Facial Emotional Expression Recognition using K-Nearest Neighbors | *Python | Scikit-Learn*

- Classified human facial emotions using facial landmarks extracted from processed images as features for a K-NN algorithm.
- Utilized Manhattan and Euclidean distance metrics, along with Cosine Similarity, to measure feature similarity for optimizing emotion classification accuracy.

File Structures and Database Systems: Relational Database | *HTML | PHP | MySQL*

- Wrote SQL commands to create and populate tables and wrote SQL queries to retrieve and then display data. Used PHP to handle form submissions, ensuring seamless user interactions and data processing.

Predictive Parser Compiler | *C++*

- Designed and implemented a predictive parser compiler in C++ using lexical analysis, syntax parsing, and tokenization to generate a functional C++ program from an input text file.
- Conducted manual testing to ensure the compiler returns error statements upon encountering syntax errors.

TECHNICAL SKILLS

- **Languages:** Python, C++, C, HTML/CSS, JavaScript, SQL (MySQL), x86 Assembly, R, PHP
- **Frameworks:** Flask, React, Next.js, FastAPI, Tailwind
- **Libraries:** Pydantic, Scikit-Learn, Pygame
- **Certifications**: Certified Microsoft Office Specialist in Word 2016**,** Excel 2016**,** PowerPoint 2016**,** Access 2016