

# MIGUEL ANGEL FIERRO GUTIERREZ

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## Skills

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- Full Stack Development | React | Vue | JavaScript | TypeScript | Tailwind | HTML | CSS | SQL | NoSQL | Node | Express | Hono | Git
- GitHub | Figma | REST API | OOP | Java | Python | C++ | PHP | System Design | Linux | Frontend | Backend | English, Spanish, French

## Experience

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### Freelance Web Developer

Vancouver, BC, CA 06/2024 – Present

- Consult with clients to understand project needs, providing technical expertise and shaping project requirements.
- Deliver comprehensive project documentation, including project timeline schedules, ensuring clear communication of deliverables and milestones.
- Create and present wireframes and high-fidelity prototypes to demonstrate potential design and functionality.
- Develop detailed data flow and user flow diagrams to explain app functionality and streamline the development process.
- Currently developing a web application for the anthropology department at Simon Fraser University to facilitate interaction with 3D models of their collection, using Vue, Nuxt3, Nitro, and PostgreSQL.

### Warehouse Associate

#### Pivot Furniture

Vancouver, BC, CA 06/2022 – 09/2023

- Manage inventory both digitally and physically, utilizing inventory management software to track stock levels, conduct regular audits, and facilitate seamless order processing.
- Inspect incoming and outgoing parts for damages, ensuring the delivery of high-quality products to clients.
- Safely load and unload cargo trucks using appropriate equipment and techniques, minimizing the risk of damage or injury.
- Provide timely maintenance and troubleshooting support for automated units and robotic equipment, ensuring their optimal performance, and minimizing downtime.
- Coordinate with the digital system and Saskatchewan's headquarters to maintain synchronization, ensuring real-time updates and accurate data across all systems.
- Continuously seek opportunities to enhance warehouse operations, proposing and implementing process improvements and cost-saving initiatives.

### Software Developer

#### INTESC Electronics

Puebla, MX 05/2021 - 11/2021

- Developed Python libraries for digital audio and image processing on ARM microcontrollers, enabling efficient and optimized performance.
- Performed version control, bug tracking, and collaboration with team members using GitHub to ensure smooth development processes.
- Maintained clear and concise code documentation, including API references, usage examples, and troubleshooting guides.
- Integrated Python libraries natively using C language to modify firmware, enhancing performance and compatibility.
- Conducted rigorous testing and debugging to ensure the reliability and accuracy of the developed libraries.
- Proactively proposed and implemented improvements to optimize code efficiency, memory utilization and execution speed.

### 3D Lab Coordinator

#### Tec de Monterrey

Puebla, MX 01/2020 - 07/2020

- Facilitated and supported students and school staff with their 3D printing projects, ensuring successful completion and optimal results.
- Identified opportunities for enhancing printer performance and efficiency, implementing modifications and upgrades to optimize output.
- Leveraged OctoPi integration to automate routine tasks, streamlining operations and freeing up valuable time for students and staff.
- Authored comprehensive and user-friendly use manuals to guide students and staff in effectively utilizing the lab's resources.
- Conducted extensive research on sustainable practices and initiatives to minimize waste in the lab, identifying projects to promote environmental responsibility.

### Python/Robotics Instructor

#### Aerobot Academy

Puebla, MX 08/2017 – 07/2020

- Successfully guided 4 generations of students through hands-on learning experiences in Python, electronics and 3D printing, while highlighting the importance of social responsibility in technology.
- Ensured that learning materials and resources were up to date and aligned with the latest industry standards and advancements.
- Actively sought out emerging technologies and trends, incorporating them into the curriculum to enhance student's learning experiences and keep pace with the field.
- Gathered and analyzed valuable student feedback to identify areas for improvement and propose changes to the program curriculum.
- Collaborated with a diverse team of instructors and educational experts to develop innovative teaching methodologies and instructional materials.
- Organized and facilitated workshops, competitions, and projects to encourage creativity, problem-solving, and collaboration among students.
- Mentored and provided individualized guidance to students, assisting them in overcoming challenges and maximizing their potential.

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## Education

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### Diploma

Langara College

Vancouver, BC, CA 01/2022 – 08/2024

- Computer Studies
- 3.97 CGPA | Graduated with Distinction

### Bachelor of Science & Engineering

Tec de Monterrey

Puebla, MX 08/2016 – 07/2021

- Major in Digital Systems and Robotics
- 90/100 GPA

## Projects

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- **INTELLIQUIZ:** Web application to generate AI-generated quizzes based on user text input or text extracted from PDF files. The user can attempt the quizzes on the site or download them as PDF files with optional password protection. **(09/2024)**
- **CASHFLOW:** Budget tracking mobile application with support for multiple accounts. Built with React Native and SQLite. **(07/2023)**
- **PHOTO-BRAILLE PRINTER:** System capable of recognizing text from a photograph and then printing the corresponding braille characters using a Raspberry Pi and optical character recognition. **(06/2020)**
- **AUTOMATED MANUFACTURING:** Designed, coded, and installed a sensor network using ROS, Python, and LIDAR sensors to help Volkswagen Mexico create the first ever autonomous cargo vehicle in Latin America. **(06/2019)**

## Others

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- **Google Certificate:** Finished the 6-part Google IT Automation with Python professional certificate. [Link](#) to certificate. **(11/2020)**
- **Solidworks Certificate:** Successfully passed the Solidworks Mechanical Design certification at the associate level. [Link](#) to certificate validation (Cert-ID: C-TZM5TRJ77P) **(03/2019)**