Fernando Jesus Rojas Reyes

DE, Rosenheim • ferrr39@gmail.com• (+49) 15226268537 • https://www.linkedin.com/in/fernando-jesus-rojas-reyes-0a6631158/

EXPERIENCE

INTERN   **April 2023 - Present, DE, Munich**
ROHDE & SCHWARZ GMBH & CO. KG

- Integrating speech-to-text technology in a communication system, with the goal of achieving a 98% reduction in background noise and a bandwidth reduction of 20%. Expected outcomes include higher transmission rates and improved communication quality.
- Constructed and tested speech-to-text and text-to-speech recognition prototypes, which resulted in a 90% accuracy rate in speech-to-text conversion and an 80% accuracy rate in text-to-speech production. The prototypes were used to explore the feasibility of integrating AI into communication technologies.

Working student   **August 2022 - March 2023, DE, Weyarn**
STERCOM POWER SOLUTIONS GMBH

- Implemented programs using LabVIEW to automate testing processes for modules such as BMS, batteries, and capacitors banks.
- Researched LabVIEW's capabilities for communication with measurement devices and connected the testing program to the company's database.
- Used MATLAB for simulations and Mathcad for power electronics circuit topologies, resulting in an 15% improvement in circuit design and a reduction in design time.
- Built LabVIEW programs to automate testing processes for modules such as BMS, batteries and capacitors, decreasing the testing time from 5 hours to just 30 minutes with improved error detection.

JR. R&D ELECTRONIC ENGINEER   **August 2021 - January 2022, MX, Cuautitlan Izcalli**
BALLHAUSEN ENGINEERING

- Achieved excellent performance metrics, including highly accurate temperature measurements with a deviation of less than 2 degrees and high system uptime.
- Designed and implemented the system from ideation to deployment, demonstrating expertise in electronics engineering and reducing system implementation time by 30%.
- Selected appropriate components for the system, resulting in a 15% cost savings.
- Worked closely with 2 different teams to successfully integrate the temperature measurement system with 3 dependent train systems, demonstrating a cooperative approach and clear communication to efficiently streamline the integration process.

EDUCATION

M. ENG. ELECTRICAL ENGINEERING AND INFORMATION TECHNOLOGY

Technische Hochschule Rosenheim • 2022- on going • DE, Rosenheim

ELECTRONICS ENGINEER

Universidad Autónoma Metropolitana • 2017- 2021 • MX, Azcapotzalco

PROJECTS

MASTER PROJECT • TECHNISCHE HOCHSCHULE ROSENHEIM

- Developed a Xilinx FPGA-based platform embedded with an ARM microprocessor and custom SPI protocol for students to test various ADC's and DAC's characteristics as part of my master's project.
- Designed a custom signal generator utilizing Verilog to generate triangle, sine, and sawtooth signals, which were transmitted to the computer via the ARM processor. This allowed students to control the signal input and visualize the signals acquired by the ADC and verified DAC output.

BACHELOR THESIS • UNIVERSIDAD AUTONOMA METROPOLITANA (UAM)

- Engineered a Python program using the YOLO network and CNN to identify if individuals in the image were wearing a facemask and to measure their body temperature accurately.
- Achieved a precision of plus and minus 0.05°C and an accuracy of detection of 85%.

SKILLS

TECHNICAL SKILLS

- Verilog
- Proteus
- Multisim
- Xilinx
- Python
- C/ C++
- Altium
- FPGA
- LTSpice
- ARM
- Rust
- AVR
- PIC
- KiCAD
- VHDL
- Assembler
- Eagle
- MATLAB
- Simulink
- Analoges und digitales Elektronikdesign
- Microsoft Office
- Altera's Quartus
- Signalverarbeitung
- LabVIEW
- Linux-Unix Embedded-Systeme

LANGUAGES

English Fluent, German Intermediate, Spanish Native

HONORS AND AWARDS

La Asociación Nacional de Facultades y Escuelas de Ingeniería (ANFEI)   **2021 MX, Mexico City**
The best graduate of Electronics Engineering of Universidad Autónoma Metropolitana

It is awarded by the institution to the best graduates in Engineering in the whole country. I had the honour to be selected as the best one in my university. This award is granted when a student archives excellence in both grades and performance throughout the bachelor's degree.

Universidad Nacional Autónoma de México (DGIRE)   **2016 MX, Mexico City**
1° Place in The Fourth Students Congress of Investigation

Award given for a group project developed at high school. The project consisted in an autonomous irrigation system using a microcontroller, real time clock, solar panels, Bluetooth communication and an electric valve. We successfully constructed a functional prototype which was presented to a jury and won the first place in this congress.