ARNOLD DSOUZA

Masters Student: Autonomous Systems

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MOTIVATION

"Driven professional seeking to leverage a diverse skill set and unwavering dedication to excel in a dynamic work environment. Committed to delivering innovative solutions and fostering collaborative success for mutual growth."

WORK EXPERIENCE

Research Assistant

Hochschule Bonn-Rhein-Sieg

April 2024 - Present Bonn, Germany

- Proposing and designing a power board.
- Developing it as a low-cost power board for fast and slow heaters.
- Optimizing AC frequency for fast heaters control.
- Programing the MCU to control the power board.
- Testing power board functionality with fast and slow heater configuration.

Graduate Engineer Trainee

Magna Automotive India Private Limited

July 2021 - January 2023 Pune, India

- Used Mobile IOT to communicate with machine.
- Created a IOT app for reducing breakdowns.
- Editing Siemens PLC program as required by an individual.
- Created a bar-code for individual job pieces in HMI (dynamic).
- Diagnosing faults in robots like FANUC and KUKA.
- Contributed to the enhancement of the Human-Machine Interface (HMI) by coding dynamic features for better user interaction and process monitoring.
- Also saved 13 lakhs rupees for the company by repairing parts like VFDs, Robot controllers, SMPS, DC Drives, and more.

C++ HTML/CSS TIA Portal CSS Node JS

Internship

Christiani Sharpline Technical Training Private Limited

August 2020 - January 2021 Mumbai, India

- Selection and use of IO link sensors for industry 4.0 with the dashboard-enabled feature.
- Electrical designing and wire connection of PLC.
- Entire Siemens PLC programming as needed by the customer.
- Inspection of mechanical components for automation and coding.
- Worked to build an automated station using Siemens PLC as desired by the companies and clients.

Ladder logic TIA Portal

EDUCATION

Masters in Autonomous Systems

Hochschule Bonn-Rhein-Sieg

April 23 - Present Sankt Augustin, Germany

- Coursework: Machine Learning, Artificial Intelligence, Autonomous Mobile Robots, Human Robot Interaction, Software Development Project, Advanced Software Technology, Robot Learning, Mathematics of Robot Control, etc.

Bachelors of Technology in Mechatronics Engineering

Symbiosis Skills and Professional University

Aug 17 - June 21 Pune, India

- Coursework: Computer Programming (C++,C#,Python), Matlab and Simulink, Applied Mathematics, Digital Signal Processing, Microprocessor and Applications, Hybrid and Electric Vehicle, Product Development, Communication Systems, Engineering Mathematics, Applied Thermodynamics, Basic Electrical and Electronics, Engineering Drawing, Strength of Materials, Dynamics of Machinery, Heat Mass Transfer.
- Class: 8.88/10 (First Class)

TECHNICAL STRENGTH

JavaScript	●●●●●
Python	●●●●○
C++ and C#	●●●●○
HTML and CSS	●●●●●
Rasa	●●●○○
GitHub	●●●●○
Blender 3D	●●●●○
Matlab and Simulink	●●●●○
Unity	●●●○○
Node JS	●●●○○
Siemens TIA Portal	●●●●○
AutoCAD	●●●●●
Solidworks and Catia	●●●●○
Magic VLSI	●●●○○

LANGUAGES

German	●●○○○
English	●●●●●
Hindi	●●●●●
Marathi	●●●●●

Internship

Electronics and ICT Academy Indian Institute of Technology Guwahati

August 2020 - February 2021 Guwahati, India

- Designing of DAC (R-2R Processing Array) using Spice, Magic VLSI.
- Designing of CMOS circuits using Spice, Magic VLSI.

Magic VLSI | Spice | Cadence | Verilog

PROJECT EXPERIENCE

Automatic light control for society elevators.
Implemented automatic light control for society elevators using a C++ program, ensuring energy efficiency by activating lights only when elevators are in use, enhancing overall sustainability.

Automatic pump control system for society.
Developed an automatic pump control system for society using C++, optimizing water consumption by intelligently regulating pump cycles based on demand, contributing to efficient resource management.

CNC machine that draws figures and writes alphabets.
Engineered a CNC machine capable of precision drawing and alphabet writing through a C++ program, providing a versatile and programmable tool for artistic and industrial applications.

Automatic CCTV monitor which turns ON / OFF at a given time for society.
Designed an automatic CCTV monitor system for society, utilizing a C++ program to schedule timed ON/OFF cycles, enhancing security measures and minimizing energy consumption during non-operational hours.

Fire detector with status.
Implemented a fire detector system with status monitoring using a C++ program, ensuring real-time awareness of fire incidents and providing a robust safety measure for timely response.

Built an economic E-bicycle for city traveling purposes.
Developed a cost-effective E-bicycle for urban commuting, incorporating both C++ and Python programming for efficient motor control and smart features, offering a sustainable and technologically advanced transportation solution.

PUBLICATION

"Building a Smart Electric Bicycle to solve Problems faced in transport": IRJET; published in Volume 8 Issue 6 June 2021

CERTIFICATE

Python 3 | PLC
Face recognition application using Python
Instrument and Control System
India International Science Festival 2020
New Product Design & Development

ACHIEVEMENTS

Designed and developed a robotic car with a robot arm using ROS for FTC (First Tech Challenge) at all India levels.

Ignited innovation with a compelling pitch and captivating animation (blender 3D) at the Smart India Hackathon (SIH), paving the way for transformative solutions.

HOBBIES

Repairing electronic gadgets | Hiking
Cycling | Football | Gardening
Board games | Cooking and Baking
Writing Poems