




PHẠM NGỌC TOÀN


Engineering

 Oct 16, 1993

 Male

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 <https://bit.ly/40rjIzP>

SKILLS

C

TypeScript

Altium

NodeJs

VueJs

STM32

Esp

PLC

INTERESTS

- controlling Systems
- embeddedsystems
- IOT Systems
- Trending technology like AI, machine learning, computer vision



WORK EXPERIENCE

VINFAST

JUNE-2023 - NOW

Vehicle development program PMO

Main responsibilities:

- _ Enhanced project management skills specific to vehicle development programs.
- _ Strengthened expertise in overseeing and managing the electrical system and software function implementation.
- _ Improved coordination and collaboration abilities with cross-functional teams to ensure timely milestone delivery.
- _ Developed proficiency in part preparation and conducting risk assessments within the automotive industry context.

HAMADEN-DENSO

MAR-2023 - MAY-2023

Project supervisor

Main responsibilities:

- _ Led IIoT projects as a Project Supervisor at Hamaden Denso factory.
- _ Develop an in-house developer team for IIoT application creation.
- _ Collaborated with external suppliers to ensure seamless project integration.
- _ Implemented agile practices and promoted team development.

Achievements and skills gained:

_ Production line monitoring system (Prototype)

- + Successfully designed and implemented a prototype production line monitoring system using Next.js (Postgres - TypeOrm), Nestjs (Redux toolkit-CSR) tech stack.
- + Get data from production line Keygen PLC -(rs485)-> Pi3+ -(HTTP-)>Server
- + Designed and implemented a production line monitoring system for improved efficiency.

HEXAGON-MI

OCT-2021 - JAN-2023

Lead Automation Engineer

Main Responsibilities:

- _ Project Manager: Oversaw design, deployment, and successful completion of projects.
- _ System Design & Electrical Design: Developed efficient system and electrical designs.
- _ Programming: Implemented automation and control software solutions.
- _ Collaboration with overseas engineers: Led cross-border engineering collaboration.
- _ Supplier Relations: Managed project procurement process.

Achievements and Skills Gained:

_ Vinfast Exterior Inspection System

- + Designed electrical circuits with AutoCAD.
- + Programmed PLCs and HMIs (Siemens & Weintek).
- + Developed data transfer service using Nestjs.
- + Programmed Kuka robot (KRL) & provided training.
- + Contributed to mechanical design. Worked with diverse technologies: laser tracker, optical & 3D camera inspection.

WORKING AS A FREELANCER

JAN 2021 - OCT-2021

Solution provider

Main Responsibilities:

- _ Design web app to monitor environment status.
- _ Design hardware (PCB) to gather data from the environment.
- _ Writing firmware for modules (Arduino, raspberry pi, esp32, esp8266)
- _ Using camera (OpenCV, python) to process vision data.

Achievements and Skills Gained:

_ Cell Multiplying Lab Environment Monitor:

- + Designed PCB to measure CO2 levels and transmit data to the server over WiFi (esp8266, Altium).
- + Developed firmware for CO2 board using esp8266 Arduino library.
- + Utilized Opencv and Tesseract with a camera to extract and store control display data in MongoDB.
- + Created a web app dashboard (nodejs, ejs, MongoDB) hosted on a Raspberry Pi 3b+.
- + Monitored emergency CO2 supply and power status on Raspberry Pi.
- + Implemented a sim 800L module to send emergency SMS and phone calls.

_ Prototyping Fault Checking System Using OpenCV:

- + Scanned product barcodes to determine the paint location within the product.
- + Checked the paint's position and assessed whether it is classified as Good or No Good.

_ Web base remote control HMI

- + Writing a web base HMI using Siemens S7-1200 web system for a weight measuring system

_ Robot Transfer System for Press Machine Production Line:

- + Designed control system drawings for a system comprising 5 robots, 4 press machines, a feeder system, and a safety system (light curtain).
- + Programing the ladder program and HMI for the system

_ Robot transfer system for Welding robot Station

- + Designed control system drawings for the robot transfer system.
- + Programmed the ladder logic and HMI to ensure smooth operation and efficient control of the system.

_Prototype (Proof of Concept) of Remote Control System:

- + Nestjs Backend
- + Esp32 Hardware (Freertos)
- + Vue 2 Frontend

_Robot Welding Station Design

- + Design electrical system for robot welding cell
- + Programming PLC and HMI.

WELDCOM INDUSTRIAL JSC

FEB 2017 - JAN 2021

BRUCO SMART FACTORY SOLUTION

APR 2019 - JAN 2021

RnD

Main Responsibilities:

- _ Developed a web-based MES system for factory status monitoring.
- _ Gathered data and signals from machines, designing solutions to transfer and store data in the database.
- _ Created APIs for server communication with machines, facilitating data retrieval.
- _ Implemented multiple drivers for seamless machine-to-PC communication.
- _ Collaborated with a 3rd-party software company to build MES software, understanding the production process for effective integration.

Achievements and Skills Gained:

- _ Transitioned from JS to TS and worked with Vuejs.
- _ Designed APIs for data interaction with modules and devices, and developed dashboards.
- _ Proficient in IIoT communication protocols: MQTT, HTTP, WebSocket, UDP.
- _ Developed dashboards for data visualization and front-end applications.
- _ Developed drivers for PLC communication via Hostlink (Keyence) and mcProtocol (Mitsubishi).

BRUCO SMART FACTORY SOLUTION

FEB 2018 - APR 2019

Automation department

Main Responsibilities:

- _ Collaborated with the team leader in designing, assembling, and installing the company's manufacturing machines.
- _ Designed a SCADA IIoT system to connect and monitor machines for the structural steel industry's factory.

Achievements and Skills Gained:

- _ Acquired knowledge about industrial SCADA networks and monitoring systems.
- _ Familiarity with MVC web architecture.
- _ Proficient in programming languages: HTML, CSS, JavaScript.
- _ Designed a web-based monitoring system using NodeJS, Express, EJS, and MongoDB.
- _ Prototyped several SCADA systems.

WELDCOM INDUSTRIAL

FEB 2017 - FEB 2018

CNC cutting department

Main Responsibilities:

- _ Specialized in using light, particularly laser, for metal cutting purposes.
- _ Provided customer support and training on machine operations
- _ Installed and set up machines at customer's factories.
- _ Proficient in fixing, debugging, and maintaining the machines.

Achievements and Skills Gained:

- _ Expertise in laser cutting technology.
- _ Knowledge of the machines installation process and their life cycle.
- _ Familiarity with the structural steel industry and metal sheet steel industry.

TOTO THANG LONG VIETNAM

DEC 2015 - FEB 2017

Engineering and Utility

Main Responsibilities:

- _ Resolving errors in the production line and factory machines.
- _ Implementing maintenance plans to prevent issues.
- _ Upgrading existing machines and developing new solutions for enhanced manufacturing efficiency and stability.
- _ Supervising and training a team of 5 workers for factory duties.
- _ Adapting PLC programs to suit current product requirements.

Achievements and skills gained:

- _ Proficient in PLC programming and HMI design, with expertise in Mitsubishi equipment.
- _ Experienced in control panel and automation system design.
- _ Worked with other PLC brands like Omron, Keyence, and Delta.
- _ Familiarity with AutoCAD and Altium for control panel designing.
- _ Well-versed in error handling situations and the factory maintenance process.



EDUCATION

HANOI UNIVERSITY OF SCIENCE & TECHNOLOGY

OCT 2013 - MAY 2015

Major: Automation and controlling engineering technology

MILITARY TECHNOLOGY ACADEMY

OCT 2017 - MAY 2019

Major: Automation and controlling engineering technology



CERTIFICATIONS

TOEIC Certificate with score 585 By Hanoi University of science and technology

2013

