PHẠM NGỌC TOÀN
Engineering

📅 Oct 16, 1993

👤 Male

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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 - OCT-2023**

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 suppervisor

Main responsibilities:

_ Led IIoT projects as a Project Supervisor at the Hamaden Denso factory.
_ Develop an in-house developer team for IoT 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), and 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.
+ Data gathering cabinet design and installation.

HEXAGON-MI	**OCT-2021 - JAN-2023**

Lead Automation Engineer

Main Responsibilities:

_ Project Manager: Oversaw design, deployment, and successful completion of project with the size more than 3 million USD.
_ 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.
_ Onsite Manage and supervise the deployment of project

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.
+ Manage all system installation and deployment, intergration of the project

WORKING AS A FREELANCER	**JAN 2021 - OCT-2021**

Solution privider

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 CO_2 levels and transmit data to the server over WiFi (esp8266, Altium).
   + Developed firmware for CO_2 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 CO_2 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

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