

Ngoc Pham

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SKILLS

INDUSTRIAL AUTOMATION

- **PLC:** Siemens SIMATIC, Allen-Bradley CompactLogix, Schneider Modicon, Beckhoff
- **DCS:** DeltaV Hardware, DeltaV v12.3.1/v13.3.1/v15, DeltaV Virtualization, DeltaV Mobile, AMS
- **Instrumentation:** Rosemount pressure/flow/level, Micro Motion flow/density/viscosity, Fisher control valves, Toshiba/ABB VFDs
- **Operating Systems:** Linux (Ubuntu 18.04/20.04/22.04), Windows Server 2008/2012/2016, Windows 7/10
- **Servers/Workstations:** VRTX, Dell T620/R740XL Servers, Dell T3600/T5820X Workstations

PROGRAMMING/SOFTWARE

- Siemens TIA Portal, Siemens Industrial Edge System
- Emerson DeltaV Explorer
- Python, C/C++, C#, Java, SQL, DAX, Visual Basic, HTML/CSS/Javascript
- Robot Operating System (ROS)
- Docker, Git, IntelliJ, VSCode, VS
- OpenMP, OpenCV, OpenCL, CUDA
- AutoCAD, Fusion360, Prusa Slicer, Bambu Studio
- MS Access, MS Office

CERTIFICATES

- 2025** Harvard CS50
- 2020** Responsive Web Design
- 2019** Certified Inst. Technician
- 2019** DeltaV Virtualization, Hardware
- 2017** DeltaV Implementation, Admin
- 2017** Rosemount/Micro Motion Service

EDUCATION

UNIVERSITY OF MANITOBA

B.Sc. IN COMPUTER ENGINEERING
Graduation: May 2023
Dean's Honor List
CGPA: 4.1 / 4.5

RED RIVER COLLEGE

DIPLOMA IN INSTRUMENTATION
ENGINEERING TECHNOLOGY
Graduation: Dec 2015
Honor Graduate
CGPA: 4.4 / 4.5

EXPERIENCE

SIEMENS | MANUFACTURING AUTOMATION ENGINEER

July 2024 – Present | Arlington, TX

- Led a \$100K project to implement a safety fence system with access control in Quality Control (QC) area, achieving \$20K in cost savings.
- Developed a proof-of-concept (POC) project for the Keyence SZ-V safety scanner to designate danger zones in QC, enhancing safety by restricting access during electrical product testing.
- Designed and built an automation lab to support POC initiatives; integrated CAD modeling and 3D printing for custom part fabrication.
- Collaborated with cross-functional teams: production, engineering, maintenance and external contractors to ensure project success.

TESLA | CONTROLS ENGINEER

May 2023 – Present | Austin, TX

- Designed and engineered complex electrical and controls system architectures for Cathode program: electrical single line diagram, control network.
- Conducted comprehensive loop checks of 1000+ IOs across diverse platforms including DeltaV DCS, Beckhoff PLC, Siemens PLC.
- Facilitated communication between PLC and DCS systems via industrial protocols such as ModbusTCP and PROFINET.
- Programmed C# application with UI to automate DCS Control module instantiation, improving engineering efficiency.
- Created intuitive and easy-to-use DeltaV graphical interfaces (HMI) to enhance operator productivity and workflow.
- Developed and integrated DCS Control modules with complicated interlock and permissive conditions.
- Conducted Factory Acceptance Test (FAT) to validate vendor equipment compliance with Tesla standards and specifications.
- Participated in critical engineering activities including HAZOP, Alarm Rationalization, Cause and Effect Matrix studies.

MANITOBA HYDRO | ENGINEERING STUDENT

May 2021 – Apr 2023 | Winnipeg, MB

- Developed SQL database application to automate the engineering processes to collect time series data of 200+ power stations.
- Composed and designed PowerBI reports, technical documentations and procedures of Electrical Load Forecast.
- Developed Python scripts to automate contingency file generation.
- Simulated contingency scenarios, and documented analysis results for electrical load studies.

LAKESIDE PROCESS CONTROLS | PROJECT ENGINEERING

Oct 2016 – Sep 2019 | Winnipeg, MB

- Experienced in startups, commissioning, integration, tuning with DeltaV DCS, PROVOX - DeltaV migration.
- Built, configured 70+ DeltaV servers and workstations including virtual environment (Hyper-V, VMware).
- Supervised electricians for hardware installation.
- Troubleshoot, verified software configuration for automation systems, and documented loop-check results.
- Performed annual Preventative Maintenance, hardware flash upgrades, system updates, hotfixes

TOLKO INDUSTRIES | INSTRUMENTATION TECHNOLOGIST

Jan 2016 – Oct 2016 | The Pas, MB

- Maintained complex industrial automation systems (DeltaV DCS and Modicon Quantum).
- Verified AutoCAD drawings of automation system architectures, fiber optic networks, process loops, P&IDs and VFD schematics.