SAMY TIMALSINA

stimalsina.ysu@gmail.com | 1727 W Emelita Ave, Mesa, AZ | 234-232-8824

SUMMARY

- 5 Years of Hands-on experience in Software and industrial automation control systems in the manufacturing industry.
- Software experience: Visual Studio, Azure DevOps, GIT, SSMS, RsLogix500, Studio 5000.
- Programming languages: C/C++, C#,.Net, JavaScript, T-SQL, HTML, CSS, Structured text, ladder logic
- Hardware experience: AB PLC, Keyence vision system, Arduino, Raspberry PI.

EDUCATION

- **MS Electrical and Electronics Engineering (**GPA: 4.0/4.0)   2016-2018
  Youngstown State University, OH
  Rayen College of Engineering and Technology -ABET Accreditation
  Thesis: Detection of agglomeration in a fluidized bed using structure-function

- **BE Electrical Engineering** (GPA: 3.77/4.0)   2009-2013
  Tribhuvan University, Nepal

WORKING EXPERIENCE

- **Software Engineer**, Auer Precision, Mesa, Arizona   Sept 2019 - Present
  - Developed wrapper application in Windows service using C++, IPG laser controller API, automating the laser marking process reducing the system downtime, and eliminating the risk of communicating with different laser controllers.
  - Developed an Image classification AI model using ML.Net to automate the manual sorting of Agilent rods by UR robot. This significantly improved sorting accuracy and efficiency.
  - Led the development of an end-to-end backend and front-end web service to parse the data from the PDF reports generated by third-party automation equipment. The data was stored in Azure storage for further analysis and reporting.
  - Developed Windows form app in C# as a middleware service between UR robot and Omron camera. The app captured film frame barcodes inspected by the camera and stored the captured UID on the Azure SQL database for traceability and record keeping.
  - Successfully instantiated ignition server on Azure cloud to optimize resource management for onsite servers, eliminating the need for additional physical servers and associated maintenance costs.
  - Designed and deployed Rest API using Asp.net core to store data from 10 automation lines and used Azure active directory for app-based authentication to secure the API.
  - Developed time-tracking web application using ASP.NET Core and jQuery in front-end. The application efficiently tracked automation group work hours and project activities, facilitating better resource management.
  - Led the automation of the welding process using Rockwell PLC, Keyence vision system, and IO sensors, effectively preventing the welding of wrong parts and minimizing errors.
  - Collaborated with cross-functional teams of controls engineers, and mechanical engineers to write PLC programs from scratch and integrate it into existing automation lines, ensuring seamless operation.

- **Software Engineer**, Ajax Tocco Magnethermic, Warren, Ohio   Sept 2018– Aug 2019
  - Designed electrical schematics and Bills of materials, specifically power and controls for Induction heating power supply using AutoCAD Electrical.
  - Developed user interface HMI program using software packages such as Factory talk view for Allen-Bradley, and WinCC and TIA portal for Siemens PLCs in induction heating, forging, and quenching applications.

- **Graduate Assistant**, Youngstown State University, Ohio   Aug 2016– Aug 2018
  - Lab. Instructor/Assistant – Instructed 16 senior undergrad students in Control System and 16 sophomore students in Digital Circuit.
  - Research Assistant – Involved in research activities related to the detection of agglomeration in Boiler Furnaces using nonlinear analysis in Matlab.

LICENSE

- FE Engineer Trainee, NCEES ID 18-708-69   May 2018-Present

AWARDS

- Graduate Assistantship, YSU   Aug 2016 – May 2018