

TESLA CO-OP REFLECTION

JOSHUA OLUSOLA

MANUFACTURING CONTROLS
ENGINEERING INTERN



Overview

- Joined Tesla in August for the Fall '22 co-op
- Worked in the Giga Factory Texas facility
- Powertrain Manufacturing Controls Engineering team
 - Support the development of new manufacturing lines



Tesla Experience

Technical skills

- Siemens PLC programming
- Robot Line Tracking
- Auto-recovery robot sequence
- Siemens servo drives recommissioning
- EPLAN
- Cycle time improvements

Non-technical skills

- Working with cross-functional teams
- Networking
- Technical communication
- Professional ethics

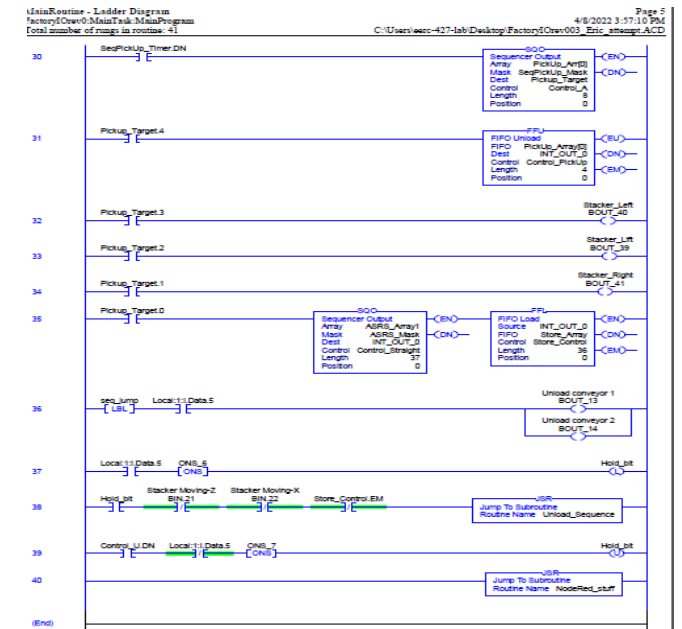
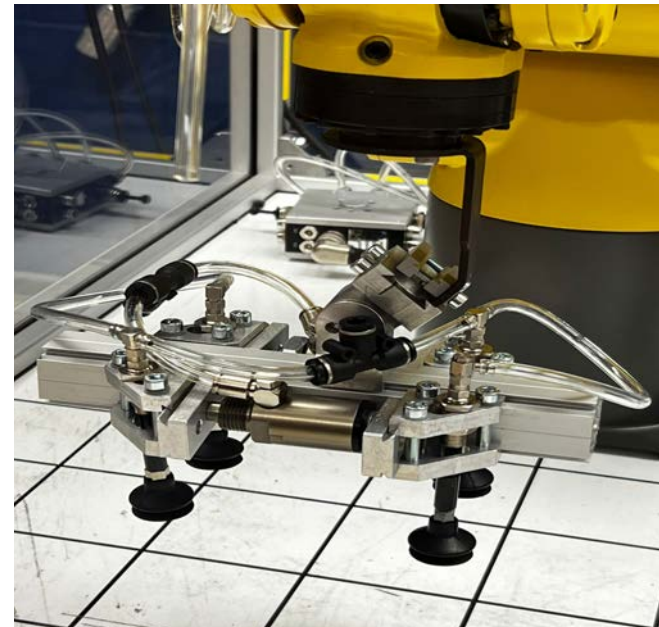
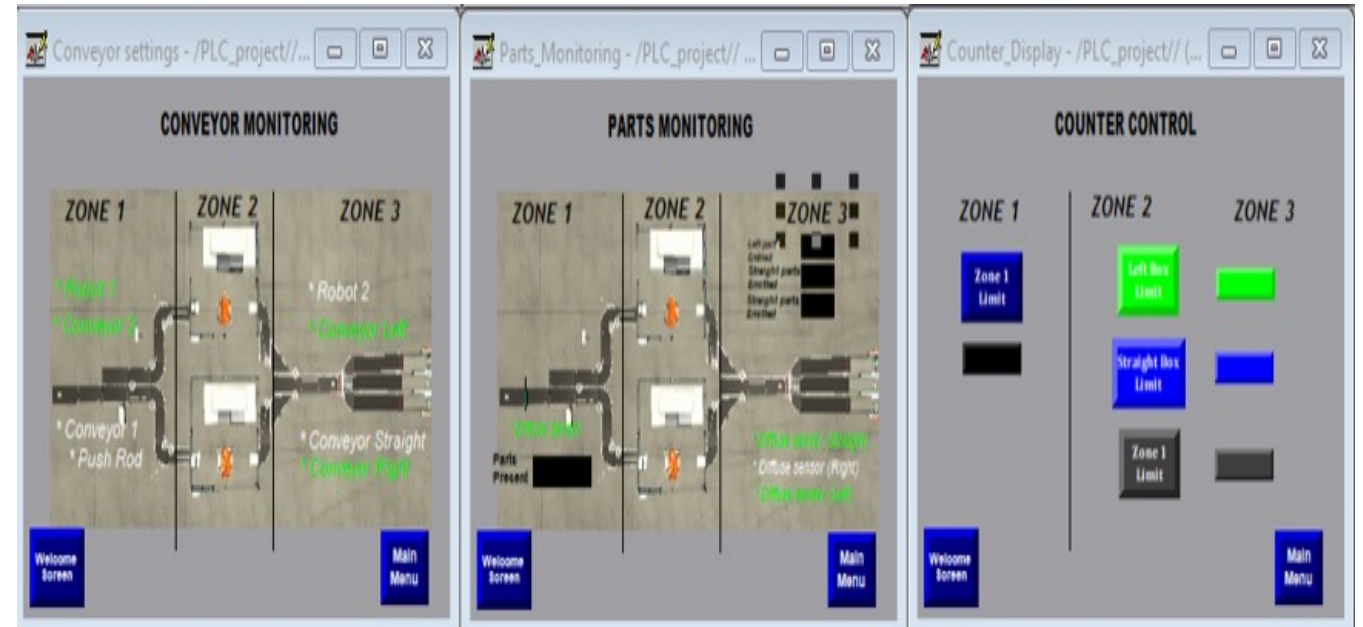
What I loved about Tesla

- Working with very intelligent professionals
- Great mentorship for interns
- Managing critical projects as an intern
- Servant leadership
- Exposure to state-of-the-art technologies
- Amazing perks

Tesla Recruitment Roadmap

Steps taken to secure an internship

- Engaged in relevant projects
- Applied through www.tesla.com/careers
- Prepared materials for the interviews
- Followed up with thank you mail after interviews



DUNSTEN DSOUZA

MS in Mechatronics

Michigan Technological University

Manufacturing Controls Engineering Intern

At

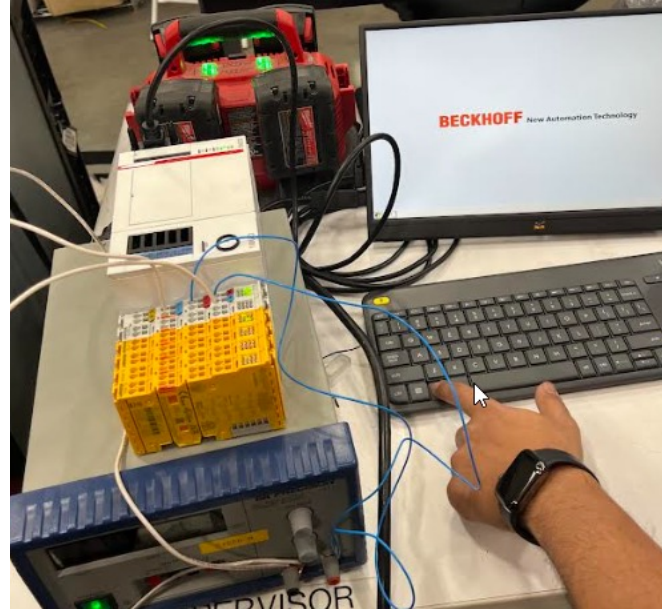
Tesla Mega Factory



My experience at Tesla



Beckhoff PLC programming



Spent extra hours playing around with the test bench



Siemens PLC Programming



Welding Robots Commissioning and Programming



Integrating SEW drives with Siemens and Beckhoff

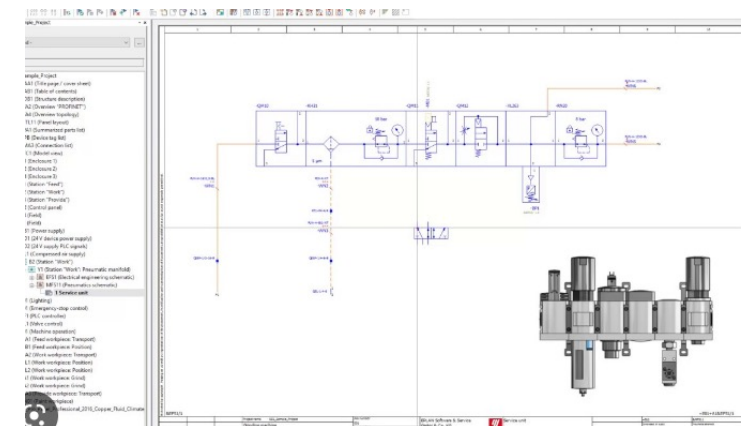
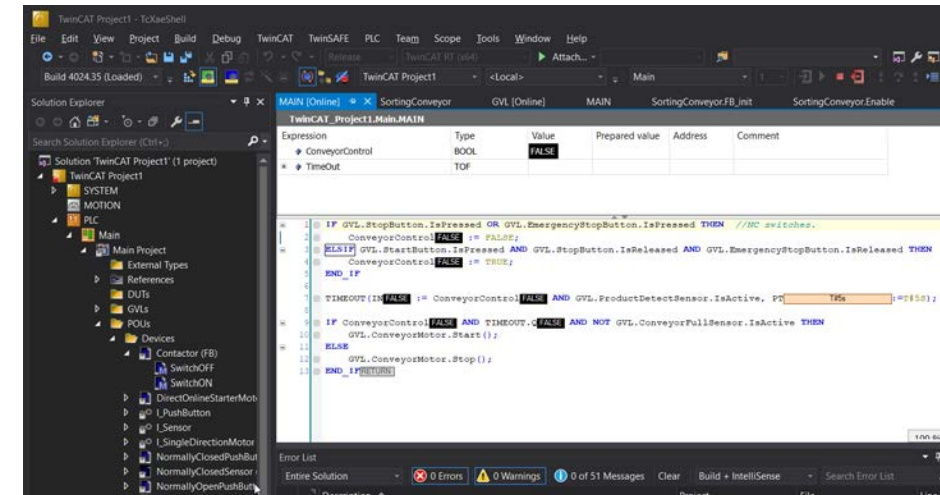


Siemens SINAMICS drive programming and commissioning

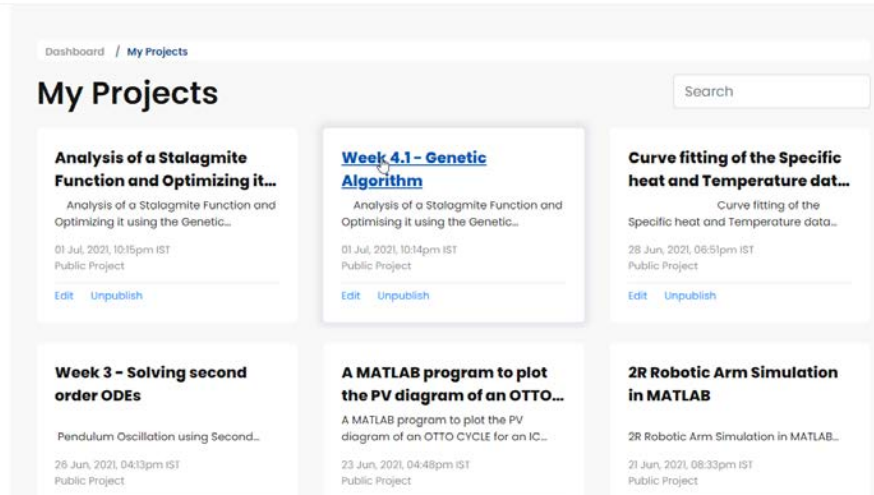
Technical skills learned



- Tonnes of programming experience with PLCs and Robots
- Using Tesla standard libraries with Beckhoff PLC and Siemens - TWINCAT 3 XAE Shell
- Equipment commissioning – Dispense Equipment, Fastening Drivers, etc
- Data analytics with SPLUNK and GRAFANA
- Control Panel designing using EPLAN
- Troubleshooting and solving production concerns related to PLC and HMIs
- How to stay awake at night !! – Night shift experience for 12+hrs per shift



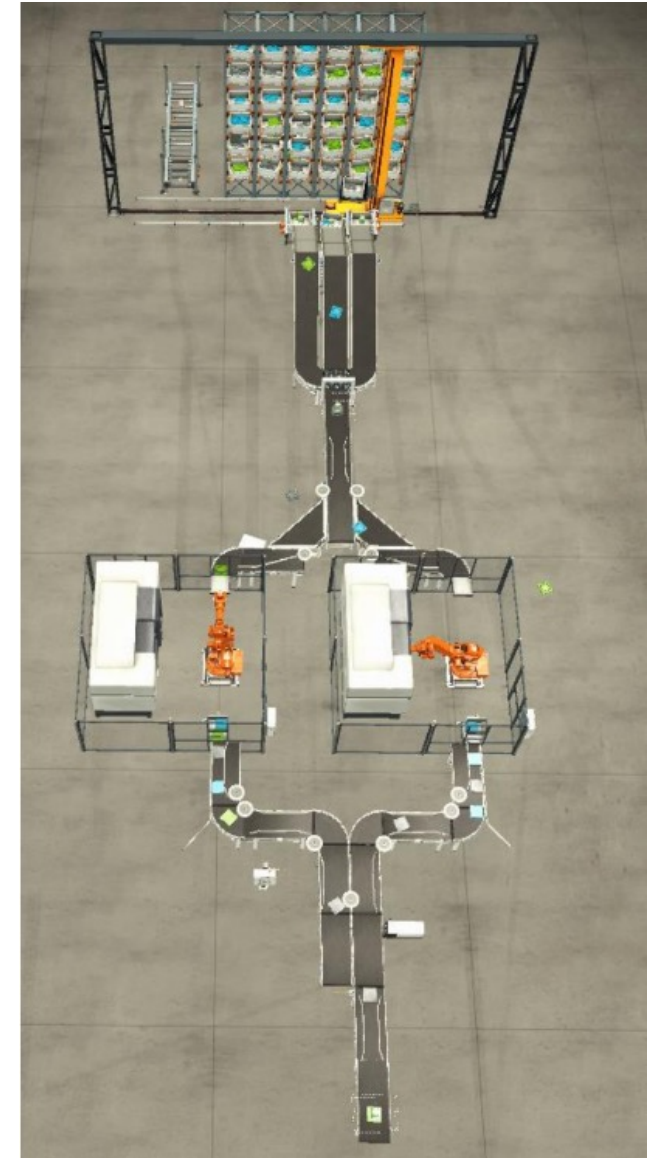
What really helped me get a job here?



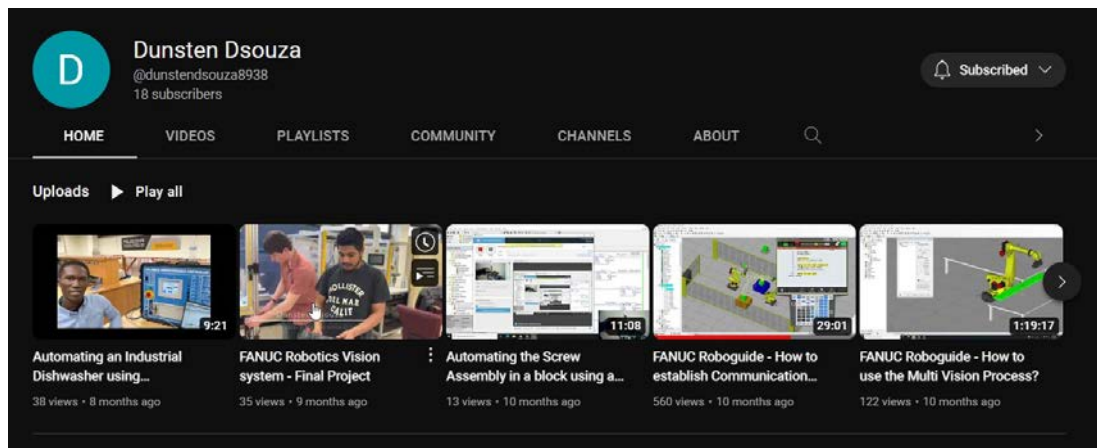
My Skill lync projects



FANUC Robot experience



My Advanced PLC final project



My Youtube Channel probably

★ **Networking with Recruiters and people out there.**

**You do not rise to the level of your goals.
You fall to the level of your systems.**

Presentation

15th Feb 2023

Automation and Controls Integration

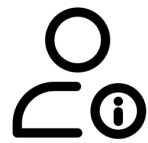


Project Presentation

Battery (Module)



Jeevan S Devagiri



About Me



Entrepreneur



Me in my human form

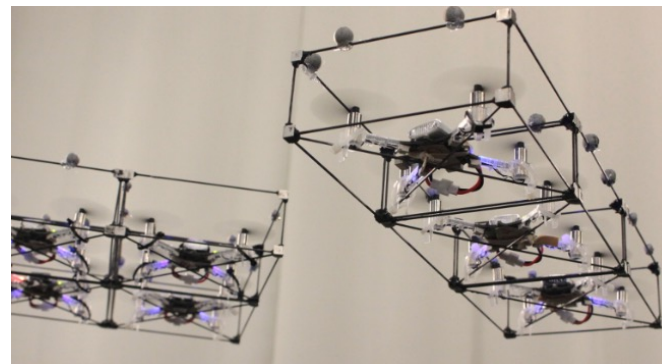


GO HUSKIES!

Grad Student



Mechatronics and Robotics



Drone Enthusiast

(Have built many and patented one)



Badminton



One Page Summary

Projects	Summary	Skills
LVDT Clamps Cleaning*	<ul style="list-style-type: none"> Implemented a check mechanism for the clamps to be cleaned a regular interval Designed (CAD), Developed (PLC), Implement (HMI) Saved approx. 200,000\$ each quarter 	CAD – Solid works PLC – Studio 5000 (AB) , Ladder HMI – Factorytalk View
Power Meter Commissioning*	<ul style="list-style-type: none"> Implemented automatic and Manal power meter to measure laser head output. Prevented a runaway of 1300 bad modules and countless more. 	CAD – Solid works Precitec and Trumpf Lasers PLC – Studio 5000 (AB) , Ladder HMI – Factorytalk View Cross functional Team and Communication
Laser Weld Monitoring System* (LWM)	<ul style="list-style-type: none"> Implemented a internal check mechanism to determine a bad laser weld Send the bad weld to a manual review station and introduce it back to the station Reduces Cycle time by rewelding the bad weld internally Saves Millions \$\$ in scrap and TIME 	CAD – Solid works HMI – Factorytalk View MES Transactions Network setup Precitec and Trumpf Lasers PLC – Studio 5000 (AB) , Ladder
PLC Multi-robot Integration via Ethernet\IP for Human Operated Quality Sampling	<ul style="list-style-type: none"> University Lab project to part inspect coke cans. Set up Two FANUC LRmate 200ic , AB PLC Designed a teach pendant 	CAD – Solid works FANUC Robot programming and Irvision TCP/IP (Ethernet)

Miscellaneous

