

Joe Eckstein

LEARNER · DELIBERATIVE · HARMONY · INTELLIGENCE · RELATOR

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Education

California Polytechnic State University, San Luis Obispo

San Luis Obispo, California

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

- Coursework in control systems, fiber optic/wireless communication, remote sensing, microcontrollers, and analog/digital circuit design.
- Senior Project researching under Dr. Smilkstein using a Fujifilm Dimatix inkjet materials printer to manufacture a transistor.

Experience

TAIT

Lititz, Pennsylvania

CONTROLS ENGINEER

Jul. 2021 - Present

- Perform safety analysis to satisfy both TAIT standards and client requirements with a focus on functional safety.
- Understand the entirety of an automated system, and how the various disciplines (mechanical, controls, artistic, etc.) interact.
- Identify controls architecture and key controls technologies to meet project needs.
- Develop custom PLC projects, software configurations, and documentation when required for projects.
- Work with mechanical and electrical design teams to ensure that systems are designed to meet safety requirements, and function according to best automation practices by being a productive contributor to design reviews.
- Provide a smooth handover to controls integration team during shop and/or site commissioning phases.
- Travel to commission machines across diverse domestic and international job sites.
- Provide TwinSAFE and S7 training to internal integration and engineering teams.
- Obtained ISO 13849 and IEC 62061 Functional Safety of Machinery training from TÜV Rheinland

TAIT

Lititz, Pennsylvania

CONTROLS TECHNICIAN

Apr. 2019 - Jul. 2021

- Build safety projects in both TwinSAFE and Simatic S7-1500 to interface with bespoke machines and TAIT Navigator.
- Facilitate Factory and Site Acceptance Testing of machinery and development of corresponding testing documentation.
- Frequent (50%) travel performing extended on-site work across diverse domestic and international job sites including theaters, cruise ships, manufacturing facilities, and theme parks implementing technology on site for customers.
- Provide training and documentation for operation and maintenance/troubleshooting to clients and internal team members.

California Polytechnic State University - Associated Students, Inc.

San Luis Obispo, California

AUDIO VISUAL TECHNICIAN I & II

Nov. 2014 - Dec. 2018

- Provided planning and technical services to university events across multiple venues including on-call support for high profile events.
- Built, implemented, and maintained business systems for client communication and record keeping to improve the customer experience.
- Managed the equipment maintenance/upgrade and employee training programs across all venues.

Projects

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|-------------------------------|---|
| Las Vegas Spectacular | Created hazard analysis/risk assessment and commissioned a Beckhoff TwinSAFE based safety system. |
| Night-time Spectacular | Commissioned a Simatic S7-1500 based show action equipment system for a theme park spectacular. |
| Cruise Ship LED Wall | Designed and commissioned Siemens Simatic S7-1500 based SIL3 anti-collision for a 16-axis LED Wall. |
| Window Fan Controller | Design and built an automatic window fan to regulate the temperature of a room. |
| Remote Lux Meter | Designed a remote lux meter using ultrasonic signal to encode the luminosity and transmit it to the receiver. |
| Automatic Fish Feeder | Designed a battery powered scheduled fish food dispenser on the TI MSP432 platform. |
| RAT VHDL CPU | Designed a processor using VHDL that ran a assembly version of Connect4 on the Basys3 FPGA. |

Honors

Functional Safety Engineer (Machinery), TÜV Rheinland

ID# 25479 / 22

Outstanding Student Employee of the Year, Cal Poly Associated Students, Inc.

San Luis Obispo, CA

Eagle Scout, Boy Scouts of America, Troop 121

Santa Rosa, CA