

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 | GPA 3.2 | DEANS LIST 1 QUARTER

Sept. 2014 - Dec. 2018

- 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

CONTROL ENGINEER II

Jul. 2021 - Present

- Performing safety analysis to satisfy both internal TAIT standards and external client requirements.
- Understanding of entire automated systems, and how the various disciplines (mechanical, controls, artistic, etc) interact.
- Identifies architecture and key controls technologies to meet project needs.
- Developing custom PLC projects and software configurations when required for projects.

TAIT

Lititz, Pennsylvania

CONTROLS TECHNICIAN

Apr. 2019 - Jul. 2021

- Build and maintain 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 II

Sept. 2016 - 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.

California Polytechnic State University - Electrical Engineering Department

San Luis Obispo, California

CPE 133 - INTRODUCTION TO DIGITAL DESIGN - INSTRUCTIONAL STUDENT ASSISTANT

Apr. 2016 - Jun. 2016

- Lab assistant helping students learn Boolean algebra/functions, function minimization, and the analysis and design of digital logic circuits on the Xilinx Basys 3 development board for the Artix-7 FPGA in VHDL.

California Polytechnic State University - Associated Students, Inc.

San Luis Obispo, California

AUDIO VISUAL TECHNICIAN I

Nov. 2014 - Sept. 2016

- Provided technical services to a wide variety of university events in Chumash Auditorium, University Union Plaza, and Recreation Center.
- Facilitated the upgrade of auditorium network to support the addition of integrated networked audio, lighting, and projection control.
- Programmed ETC Unison Architectural Lighting controller and EOS console for custom events and to suit the facility's evolved needs.

Projects

Nighttime Spectacular

On-site expert for a S7-1500 based show action equipment for a theme park night-time spectacular.

Cruise Ship LED Wall

Design and commission Sinamics S7-1500 based SIL3 anti-collision for a 16-axis cruise ship LED Wall.

Window Fan Controller

Built an automatic window fan to regulate the temperature of a room considering environmental conditions.

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.

FM Receiver

Designed an FM receive/transmit pair utilizing a Keysight (HP) ADS designed microstrip low pass filter.

iFixit Repair Guide

Produced a disassembly and repair guide for the Ryobi P202 power drill for the iFixit website.

Honors & Awards

May 2018 **Outstanding Student Employee of the Year**, Cal Poly Associated Students, Inc.

San Luis Obispo, CA

Nov. 2013 **Eagle Scout Mentor Pin**, Ethan Renouf, Eagle Scout of Troop 121

Santa Rosa, CA

Apr. 2013 **Eagle Scout**, Boy Scouts of America, Troop 121

Santa Rosa, CA