

Andrew R. Noble

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EXPERIENCE

Robotics Engineer, Tortuga AgTech — Denver, CO, Oct 2021 - April 2023

- Designed PCBA + Python ROS node for a Nvidia Jetson Nano to perform diagnostics for end-effector units, reducing troubleshoot time from 30 to 3 mins
- Conducted field software tests (releases, features, A/B), interpreted and reported results for software team
- Developed ultraviolet fungi treatment system, offering customers new chemical-free fungicide service ([video](#))
- Developed fail-safe UV bulb test stand, allowing colleagues to iterate around hazardous hardware in the lab
- Did root-cause analysis for fleet slip ring comms failure, deployed mitigation, enabling record harvest volumes
- Extensive robot troubleshooting, bring-up, and repair through entire tech stack
 - *Mechanical*: cable pinch damage, bent arms, motor replacements + calibration (teknik clearpath)
 - *Electrical*: faulty PCBs, unreliable connections, ground shorts
 - *Software*: misconfigured software, container deployment of ROS2-based robots
- Managed California site for 9 weeks, maintaining unprecedented 3x/week harvest rate, 80%+ fleet health

Field Robotics Engineer Intern, Tortuga AgTech — Santa Maria, CA, Summer 2020

- Conducted software release and feature tests, communicated results to Denver SWEs

Mechanical Engineering Intern, Coffman Engineers — Anchorage, AK, Summer 2019

- Developed pipeline loading estimates based on environmental conditions on AK's northern oil fields

Career Transition Period, May 2023 - Current

- **Sales Specialist**, REI — Anchorage, AK, January - August 2024
- **Drafter**, Alyeska Pipeline Service Company — Anchorage, AK, Sept 2024 - Jan 2025
- After Tortuga, I took time to recalibrate my path. I biked across Patagonia and began a focused shift toward software, a long-time interest. Since then, I've been sharpening my skills in both low-level software and web development, preparing to re-enter the field on the software side of mechatronics.

EDUCATION

Bachelor of Science, Mechanical Engineering (Mechatronics), California Polytechnic State Univ., SLO — 2021

- GPA: 3.8

SOFTWARE PROJECTS — see Github

Bootloader

- a bootloader written in x86 assembly to load C code into memory on a qemu floppy disk

Circuit Tutor

- React/FastAPI proof-of-concept for generating electrical schematics from natural language: circuit-tutor.xyz

C ASCII Animations

- a set of ASCII animations of 3D solids made with linear algebra and C

Mental Math

- A small react progressive web app for quickly practicing mental math:
<https://www.andrewnoble.me/mental-math/>

SKILLS

- | | |
|---|---|
| - C, C++, Python | - CAD: Onshape, Solidworks, Altium, AutoCAD |
| - Linux cmd line debugging and operations | - Drilling, tapping, soldering, crimping |
| - Web dev: HTML, CSS, Javascript, React | - Reading electrical schematics |
| - Git, github actions, ROS2, docker, postgresql | - Multimeter, oscilloscope usage |