

Nikolas Johnson

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EDUCATION

UNIVERSITY OF WASHINGTON

B.S. MECHANICAL ENGINEERING (MECHATRONICS)
Sep 2016 – Dec 2020 | Seattle, WA
Bachelor of Applied Science (BASc)
Graduated 2020, GPA: 3.53

EXPERIENCE

STUDIO ALLOY | MECHATRONICS ENGINEER

Nov 2022 – Present | Portland, OR

- Consulting and design in EV & startup environments.
- Designed and implemented vehicle firmware, PCB control hardware, and performed structural analysis.
- Managed multidisciplinary projects balancing electrical, firmware, and mechanical integration.
- Led project management and client communication to deliver systems under tight timelines.

MERCURY METAL | ELECTRICAL / MECHANICAL DESIGN ENGINEER

Jul 2021 – Oct 2022 | Eugene, OR

- Optimized and scaled sheet metal manufacturing process
- Designed mechanical and electrical subsystems for custom fabrication projects.
- Delivered production-ready designs for high-volume manufacturing.
- Lead development of control system components and integrated electrical hardware.

SEDRO TECHNOLOGIES | MECHANICAL ENGINEERING INTERN

Jul 2019 – Sep 2019 | Sedro-Woolley, WA

- Collaborated with the electrical engineering team on high-power electronics and PLC programming.
- Supported development and testing of control hardware for Varcor® waste processing systems.
- Integrated mechanical and electrical subsystems to improve reliability.

UNIVERSITY OF WASHINGTON | UNDERGRADUATE TEACHING ASSISTANT – SOLIDWORKS & DRAFTING

Sep 2017 – Dec 2020 | Seattle, WA

- Taught SOLIDWORKS modeling, engineering drawings, and GD&T standards.
- Helped students interpret design documentation and build CAD fundamentals.

UNIVERSITY OF WASHINGTON | SOUND TECHNICIAN

Jul 2018 – Dec 2020 | Seattle, WA

- Chief technician in campus recording studio, maintaining and repairing professional audio systems.
- Served as recording/mixing engineer for larger ensemble projects.

SKILLS

ENGINEERING

Structural Analysis • Documentation
Design for Manufacturing
Sheet Metal Design • Automation
Steering & Suspension Design

ELECTRONICS

PCB Design • Circuit Design
Firmware (C++, Python, Java)
Control Systems • IoT • Robotics
Power Analysis • Embedded Systems

MANUFACTURING

Electronics Assembly
CNC programming
Manual Mill & Lathe
Plasma Table • Press Break
FDM, SLS, and SLA 3D Printing

SOFTWARE

SOLIDWORKS • MATLAB
Fusion 360 • AutoCAD • NX
Ansys • Computer Simulation
Eplan • Plus+1 Guide
PLC Programming (Siemens TIA Portal)
Excel and other MS Suite

LEADERSHIP

Project Management • Team Leadership
Cross-functional Collaboration

PROJECTS

UW HPS

- Led design and integration of electronic control systems.
- PCB design, C++, data acquisition, and systems integration.

ARIEL NOMAD CONVERSION

- Converted Ariel Nomad to 350kW EV with Cascadia Motion support.
- PDU design, structural design, and CNC-machined battery components.

4-20MA LORA NODES

- Developed ESP/LoRa sensor nodes with cloud integration.
- Designed PCBs and built AWS MQTT backend for remote data logging.