Anuj Krovvidi

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Education

University of Washington, Seattle **Expected 2028**
B.S. Mechanical Engineering GPA: 3.5 *Seattle, WA*

Experience

Blackstar Computers **Apr 2026 – Present**
Hardware Engineering Intern *San Francisco, CA*

- Designed consumer electronics enclosures across mechanical, thermal, electromechanical, and acoustic domains, driving products from concept to prototype with cross-functional teams in SF and Shenzhen.
- Engineered a novel audio system integrating enclosure design, transducer selection, and audio electronics into one of the smallest form factors on the market; tuned speaker–microphone isolation and cavity geometry to beat industry echo return loss benchmarks by **10%**.

Dynon Avionics **Aug 2025 – Dec 2025**
Mechanical Engineering Intern *Woodinville, WA*

- Designed avionics components and PCBA enclosures in SolidWorks; built fatigue and climate test rigs for servo validation across temperature and load cycling profiles.
- Developed manufacturing fixtures that reduced production time by **20%**.

Jemco Components and Fabrication **Sep 2024 – Mar 2025**
Mechanical Engineering Intern *Kirkland, WA*

- Inspected aerospace components for SpaceX, Blue Origin, and Amazon Kuiper via PC-DMIS CMM; applied ASME Y14.5 GD&T, Six Sigma, and FMEA standards in a tight-tolerance production environment.

Brunton Lab for Data-Driven Dynamics **Sep 2025 – Present**
Undergraduate Researcher *Seattle, WA*

- First-author paper on direct policy optimization of nonlinear dynamics (CFD, controls, robotics), submitted to **APS-DFD 2026**; researching active learning for dynamical systems in the low-data regime.

Projects

Open-Ear Wearable Audio Glasses | *Acoustics, PCB Design, Audio Engineering* **Jun 2026 – Present**

- Designed a slim open-ear audio wearable end to end: a single ESP32 feeding two MAX98357A I2S amps, each paired with one driver in its own temple, linked by an FPC power/audio bridge across the frame.
- Engineered a dipole speaker layout with tuned outlet slits for far-field leakage cancellation; characterized leakage via calibrated mic sweeps to within **75%** of the dB(A) rating of Meta Ray-Ban glasses.

Pressure-Sensing Smart Insole | *Flex PCB, Embedded Systems, 3D Printing, BLE* **Dec 2025 – Apr 2026**

- Prototyped insoles using piezoresistive film and custom flex PCBs in self-developed 3D-printed foam; coordinated Shenzhen beta builds and reconstructed knee joint kinematics from sensor data.

Haptic Feedback Wristband | *Wearables, Haptics, Electromechanical Design* **Oct 2025**

- Prototyped and tested a haptic wearable integrating 4 LRAs with drive electronics; designed the enclosure for heat rejection and vibration isolation.

Technical Skills

CAD & Simulation: SolidWorks, SolidWorks PDM, OnShape, ANSYS, nTop, FEA, SimScale
Electronics: KiCad, Flex/Rigid PCB Layout, PCB DFM, ESP32, I2S/PDM/I2C, BLE, Class-D Amps
Test & Measurement: Soundcheck, REW, Oscilloscope, Multimeter, CMM/PC-DMIS
Fabrication: 3D Printing (FDM & Resin), CNC Milling, GD&T (ASME Y14.5), DFMEA, DFMA, DfAM, Six Sigma, Composites
Programming: Python, Java, MATLAB/Simulink, PyTorch, JAX

Awards

DubHacks – Best Project Award & Best Use of ElevenLabs API

FIRST Dean's List Finalist USA Lacrosse Academic All-American