BEN LEVY

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SUMMARY

Multidisciplinary Engineer dedicated to building functional, precise, and creative solutions to complex physical problems. Combining a deep Mechanical Engineering foundation with full-stack software capability to lead 0-to-1 builds - from biomedical wearables to robotic exoskeletons. Passionate about technical entrepreneurship: asking the right questions to solve the right problems using tech.

EDUCATION

University of Wisconsin-Madison, Madison, WI — Expected Dec 2026

Bachelor of Science in Mechanical Engineering — GPA: 3.83/4.0 (5x Dean's List)

- **Relevant Coursework:** Mechatronics, Instrumentation and Measurements, AI/ML for Material Science, Advanced CAD, Thermodynamics, Fluid Dynamics, Metals and Polymer Manufacturing.

EXPERIENCE

BeatRite — Madison, WI

Product Engineer — Aug 2025 – Present

- **Lead Engineer for pre-seed biomedical startup**; translating clinical research into a functional wearable system integrating PPG, ECG, and IR sensors.
- Managing technical roadmap and directing an EE to ensure high-fidelity signal quality for downstream ML modeling.
- Architecting end-to-end hardware-to-mobile data pipeline for native iOS app; implemented Pan-Tompkins algorithm in Python for real-time R-peak detection.

GE HealthCare — Madison, WI

Applied AI Engineer (Contract) — Aug 2025 – Dec 2025

- **Promoted from Co-op** to lead development of financial AI tools; utilized LLMs to automate complex company-wide budget allocations.

V&V Automation and Test Tools Engineering Co-op — Jan 2025 – Aug 2025

- **Awarded CTO's 3 Heartbeats Award** for delivering "AI ARC OPS" (RAG), reducing workforce database query time from 45 min to $<$10s for 12+ managers.
- Engineered 24/7 Monte Carlo testing framework for anesthetic equipment, simulating 100k+ breathing cycles via 3D-printed physical interfaces for unattended stress testing.

Glass Imaging — Los Altos, CA

Mechatronics Engineering Intern — June 2024 – Dec 2024

- **Led multidisciplinary project** integrating hardware and machine learning for advanced camera prototype; engineered novel lens housing to leverage AI-enabled lens design.
- Designed autonomous optical testing labs, reducing experiment duration by 30% via hardware-software integration.

Madison Machine Interaction Lab — Madison, WI

Undergraduate Researcher — Nov 2022 – May 2024

- **First Author (IEEE Haptics 2024):** Pioneered a novel method of utilizing **layer jammers as actuators** for VR haptic feedback devices.
- Methodically analyzed variable friction relationships to optimize the mechanical response of soft robotic prototypes.

PERSONAL PROJECTS

Berr Exo - Senior Design Project — Aug 2025 – Present

- **Leading mechanical and control architecture** for a single-arm wearable exoskeleton; developing real-time Python control loops via UART to a brushless DC motor at the elbow joint.
- Won **$3,000 Brogden Design Competition** funding for mechanical and power electronics innovation.

Theta Tau — Jan 2023 – Present

- **Executive Board Member:** Established the chapter's first corporate sponsorship program, securing **$4,000+ in funding** and building direct relationships with industry partners.

SKILLS

Hardware: CREO, Solidworks, DFM/DFA, FEA, MATLAB/Simulink, CNC Machining, Microcontrollers, Biosensors.
Software: Python, C/C++, SQL, FastAPI, Swift, RAG Architecture, Azure LLMaS, Local LLM Deployment.
Languages: Hebrew (Native), English (Native).