Joshua Dolgin

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Work History

Verkada, San Mateo, CA   **Sept 2023 - Present**

Verkada is a San Mateo, CA-based company that develops cloud-based building security and operating systems.

Product Design Mechanical Engineer (Cameras)

- Brought a new camera power accessory (confidential) to market, including creating mockups, thermal analysis, cost negotiations, and tooling kickoff/design for sheet metal and die-cast parts. The accessory is both IP67 and IK10 rated.
- Led Mechanical Engineering efforts for a new security camera project (confidential), responsible for Research, Prototyping, RFQ, PRD, and EVT stages, the camera is expected to increase yearly revenue by $ 500,000 USD+.
- Used statistical tolerance loop analysis to ensure proper clearance for part assembly and product functionality.
- Collaborated closely with overseas vendors in Taiwan, China, and Vietnam to implement DFMA principles, optimizing the production process for the security camera designs and reducing BOM cost by 30%.
- Conducted comprehensive IP and IK testing on existing and new security cameras, validating their performance and reliability in various environmental conditions, and contributing to product quality improvements.

Kindred AI, Toronto, On   **January 2023 - April 2023**

Kindred AI, is a robotics and artificial intelligence (AI) company that develops robots to solve real-world problems.

Robotics Hardware Engineer - On Grid Robotic Pick

- Researched and fabricated custom FDA-compliant suction cups with varying durometers using urethane casting. Increased pickable grocery items by 10% and improved maximum robot acceleration by up to 15% for certain items.
- Implemented DFMA methodologies to design high-volume, precision parts for next-generation robotic pick end effectors.
- Built an object that has configurable mass and porosity to imitate any pickable grocery item, which is used to identify maximum robot acceleration for individual SKUs.

OMERS Ventures, Toronto, On   **May 2022 - August 2022**

OMERS Ventures is a global, early-stage venture capital (VC) fund, one of Canada's largest pension funds

Software Developer

- Developed a signal processing pipeline to notify teams of potential deals, by using Prefect to orchestrate Python code that leveraged various web scraping tools, Web APIs, and SQL databases.
- Created a 5 ft x 5 ft custom, open-source Word Clock for the reception area, with completely original 3D printed and CNC machined pieces, and embedded C software. The clock can tell time in 3 distinct time zones, and includes various other animations and functions.

Untether AI, Toronto, On   **September 2021 - December 2021**

UntetherAI helps companies executing AI workloads to run neural networks faster, cooler, and more cost-effectively.

AI Accelerator Hardware Engineer

- Researched and implemented a variety of passive/active cooling techniques and configurations on TsunAImi, a GPU sized device that contains 4 of Untether AI's accelerator chips.

NMC Dynaplas, Scarborough, On   **January 2021 - April 2021**

NMC Dynaplas is a high-precision injection molder of complex, plastic components, selling primarily to automotive suppliers.

Manufacturing Engineer

- Designed and fabricated multiple test fixtures (3D printing, Machining) to hold parts for CMM measuring, reducing the average time to measure parts by 500%.

Education

- **University of Waterloo:** BASc, Mechatronics, GPA: 3.99/4.0   **Sept 2020 - May 2025**
  - **Awards and Honours:** President's Scholarship of Distinction, Term Dean's Honour List: 1B, 2A, 2B, 3A

Technical Skills

Design: CAD (Solidworks, Fusion, Onshape, NX, Creo), FEA (Ansys, Autodesk, Solidworks), DFM, DFA, Generative Design, Laser Cutting, 3D Printing (FDM, SLA, SLS, MJF), CNC, Manual Machining, Injection Molding, Die Casting, and Sheet Metal.
Hardware: Design (Altium, Eagle), THT and SMT Soldering, Reflow.
Software: C++, C, Python, Verilog, System Verilog, Assembly, VBA, MATLAB and basic SQL, HTML, CSS, JS.