ADRIAN POPIELAS

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Skill Summary

Engineering Tools
Solidworks, Autocad, Altium, ROS, Arduino, Matlab, C++, Microsoft Office

Personal Skills
Problem Solving, Organization, Teamwork, Leadership, Interpersonal, Attention to Detail

Manual Skills
Machine shop, Woodworking, circuit soldering and PCBA modification, Ballroom Dance

Languages
English
French (Fluent)
Polish (Oral Fluent, Basic Writing)

Education

University of Waterloo
Honours Bachelor of Applied Science
*Mechanical Engineering (*Biomechanics Option)
April 2017

Certifications

Professional Engineers Ontario
P. ENG License
Licensed and Practicing Professional Engineer

Work Experience

Mechanical Engineer — **Clearpath Robotics**
August 2021 – October 2024 — Waterloo, ON

- Completed full system design tasks for multiple robot projects including mechanical and electrical design, testing, and documentation.
- Created 3D Parametric Solid Model Designs and 2D Drawings using Geometric Dimensioning and Tolerancing techniques to facilitate the development of new products and the continuous improvement of existing platforms.
- Developed a new product (TurtleBot 4) from concept to market including design, engineering, test developments, and transitioning the project to the Production Team.
- Interacted with local and overseas suppliers for parts used in large scale and smaller scale projects. Manufacturing methods included sheet metal, injection molded plastics, 3D printing, and CNC machining.
- Worked with other members of a diverse interdisciplinary team to aide customers with issues and provide updated design solutions.
- Presented at ROSCon in Kyoto, Japan in 2022 and the *Think, Sense, Act* Podcast about the product development process for the Turtlebot4. Presented on camera for robot platform promotion.

Mechanical Designer — **Accelerated Systems Inc.**
September 2018 – August 2021 — Waterloo, ON

- Performed engineering calculations for safety critical components of gearbox and motors.
- Strong experience with Solidworks for mechanical design of prototypes as well as mass manufactured products including electric motor parts and electronics for electric vehicles.
- Experience performing FEA simulations to verify design prior to manufacturing.
- Developed, completed, and reported on tests for product validation and verification.
- Hands on with rapid prototype building, testing, and debugging including machine shop usage.
- Created drawings with GD&T best practices, including Bills of Material (BOM). Maintained revision control through Product Data Management (PDM).

Mechanical Engineering Lead — **Averro Robotics**
February 2018 – August 2018 — St. John's, NL

- Prototype design and build of cable climbing robot to facilitate safer and lower cost inspection of communication tower guy wires using Autodesk Fusion 360.
- Created mechanical drawings and packages for third party machine shops using GD&T best practices.
- Researched applications of LIDAR for tower structural inspection through ground based and drone deployment.