Ryan Ramminger

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Education

University of Birmingham – United Kingdom	**May 2024**

Master of Science – Robotics

University of Wisconsin – Green Bay	**May 2022**

Bachelor of Science – Mechanical Engineering, GPA: 3.54/4.0

Minor in Mathematics, Business

Academic Projects

Computer Vision Educational Videos: @ryry_thecvguy	**Sep 2024 - Present**

- Produce short-form videos on TikTok and Instagram to explain computer vision topics, combining theory, coding examples, and practical insights.
- Utilize Python, OpenCV, and machine learning frameworks to showcase real-world applications of computer vision.

Blind Navigation Assistance with Feedback Glove: *Computer Vision, Python, Raspberry Pi, Vibration Motors*	**Sep 2023**

- Engineered a real-time object detection deep learning vision system to trigger vibration motors on the user's palm.
- Encoded robust error handling, motor control mechanisms, and a custom 3D-printed camera housing for reliable and safe system operation.
- Paper - "Navigation Assistance for the Visually Impaired Using Deep Learning and a Vibrotactile Glove" [1].

Professional Experience

**Robotics Engineer	Kaleidoscope Innovation (Contracted to Amazon Robotics)**	**Mar 2025 – Present**

- Support daily operations of Alpha/Beta ABB robotic work cells, performing onsite hardware, software, and controls troubleshooting.
- Conduct system testing, implement hardware changes, present findings, and coordinate with remote Amazon Robotics engineering teams for continuous improvements.
- Perform preventative maintenance, diagnose mechanical/electrical issues, and facilitate product tests to enhance robotic performance and reliability.

**Mechanical Engineer for Filtration Systems	Tanda BioTech (Startup)**	**Sep 2024 – Apr 2025**

- Design and test filter and flow path prototypes, creating sixteen custom products from scratch to enhance performance while reducing manufacturing and customer costs.
- Maintain resin and filament 3D printers, leveraging additive manufacturing for rapid prototyping

**Clinical Robot Associate	Diligent Robotics**	**Sep 2024 – Feb 2025**

- Managed and assisted mobile navigational service robots in a hospital environment, ensured safe operations, interactions, and smooth integration with clinical workflows.
- Diagnosed and resolved real-time technical issues, provided engineers with critical data and feedback to enhance robot performance and reliability.
- Collaborated with multidisciplinary teams to optimize robotic operations and ensured seamless operation.

**Freelance Engineer / Hardtech Development Contractor	mHUB**	**Aug 2024 – Mar 2025**

- Developed and implement tailored solutions that improve functionality and efficiency, ensuring successful project outcomes and client satisfaction.
- Provided engineering expertise to client companies, identified and addressed key challenges in product design and process optimization during collaborative brainstorming sessions.

Skills

- **Applications:** SolidWorks, AutoCAD, Tinkercad, Onshape, Simulink, ANSYS Workbench, Google Colab, Microsoft Office 365, ROS, GitLab
- **Technical Tools:** Mechatronics, Control Systems, Embedded Systems, Arduino, Raspberry Pi, Sensors, Actuators, Machine Vision, Image Processing, OpenCV, Caffe, TensorFlow, PyTorch, Linux, CapCut
- **Programming Languages:** Python, MATLAB, C/C++, PowerShell

Certifications

- Python for Everybody – University of Michigan (Coursera)	**July 2025**

Honors and Affiliations

- UBRobotics Club	**Jan 2023 – May 2023**
- University of Wisconsin – Green Bay Degree Honors: Cum Laude	**May 2022**
- University of Wisconsin – Green Bay Swim Team Captain's Award for Leadership	**May 2021**