Ryan Khairollahi

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EDUCATION

Vanderbilt University, School of Engineering   B.S. in Computer Science
Expected Graduation: May 2027   *Aug. 2023 - Present*

- o **Minors:** Data Science, Scientific Computing
- o **Technical Coursework:** Program Design & Data Structures, Algorithms, Intermediate Software Design, Computer Architecture, Linear Algebra, Data Science, Technical Communications, Discrete Structures

PROFESSIONAL EXPERIENCE

Deloitte   Hermitage, TN
Software Engineering Intern – Product Engineering (AI/ML)   *Jun. 2025 - Aug. 2025*

- o **Autonomous Navigation (SLAM + LiDAR):** Engineered voice driven waypoint navigation for Boston Dynamics' quadrupedal robot Spot using the official SDK; validated across 50+ runs, consistently reaching waypoints within ~1 yard accuracy.
- o **AI/ML Showcase:** Co-presented Spot robotics demo to 20+ Deloitte executives, highlighting AI/ML and prompt engineering applications to drive adoption of advanced automation technologies for the Greenhouse Program.
- o **AI Team Project:** Led a 6-member intern team in developing an Agentic AI conferencing assistant for real-time presenter feedback and automated hardware troubleshooting; delivered final pitch to senior leaders for 2nd place.

Deloitte   Hermitage, TN
Software Engineering Intern – Product Engineering (AI/ML)   *Jun. 2024 - Aug. 2024*

- o **Multilingual Interaction & Behaviors:** Programmed Softbank Robotics' humanoid Pepper robot with LLM function-triggering to enable language switching and 5+ interactive behaviors to boost audience engagement.
- o **Audio Detection Override:** Built Python GUI to toggle Pepper's listening state, raising recognition reliability from ~70% to >95% across 5+ noisy test environments; deployed tool in all subsequent high-stakes demos.
- o **AI Showcase:** Deployed speech and audio detection system at a firmwide AI conference, enabling reliable live demos for 200+ internal stakeholders and executives and supporting firmwide AI adoption initiatives.

Blockify   Brentwood, TN
Co-Founder   *Sep. 2022 - May 2023*

- o **STEM Outreach:** Designed affordable robotics prototypes aimed at expanding access for underfunded schools.
- o **Quadruped Robot Design:** 3D-printed chassis and integrated Arduino-based motion control in C++, achieving stable gait patterns and reducing build cost by ~40% vs. commercial robotics kits.
- o **Startup Pitch:** Presented live demo at Founders Live Nashville to 100+ investors and entrepreneurs, receiving early partnership interest and product feedback.

PROJECTS

Glasses for Good – ***Skills:** TensorFlow, Django, REST, LiDAR, 3D Printing*   *Jul. 2025 - Present*

- o Developing ML pipeline trained on LiDAR facial scans to generate custom-fit glasses for children with craniofacial deformities, collaboration with Vanderbilt University Medical Center ophthalmology.

Vanderbilt Motorsports – ***Skills:** MATLAB, Splunk*   *Aug. 2025 - Present*

- o Designing telemetry system to integrate ECU and RaceBox data for real-time Formula SAE vehicle analysis; exploring ML-based optimization for driver performance and system efficiency.

TECHNICAL SKILLS

- o **Languages:** Python, Java, C++, R, MATLAB, HTML, CSS, SQL
- o **Frameworks & Tools:** Git, Docker, VMWare, RStudio, Blender
- o **Environments:** Linux/Unix, Bash, GitHub
- o **Hardware:** Raspberry Pi, Arduino, PC Building/Soldering