Romir Vyas

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WORK EXPERIENCE

Vecna Robotics, Inc. **03/2025 – 10/2025 (6 mo.)**
Senior Mechanical Engineer *Waltham, MA*

- Contributed to the mechanical design of Autonomous Mobile Robots (AMRs) for warehouse automation, with a focus on reliability and ease of manufacture.
- Developed precision assemblies for sensors, lidars, cameras, and other robot components in SolidWorks.
- Managed configuration and document control as PLM administrator to ensure full design traceability across the hardware team.
- Released production-level drawings to vendors for both new product designs and DFM-driven updates to legacy components.
- Applied in-house manufacturing experience to accelerate prototype builds and shorten design cycles.

GPR, Inc. **09/2018 – 03/2025 (6 yr. 7 mo.)**
Senior Mechanical Engineer 09/2023 – 03/2025 *Somerville, MA*

- Led the mechanical design, fabrication, and validation testing of a novel Ground-Positioning Radar (GPR) for autonomous vehicle localization leading to the company's successful acquisition in 2025.
- Developed multiple generations of GPR sensors utilizing SolidWorks, ANSYS FEA, DFMEA, GD&T, and Design Validation Testing (DVT) to optimize size, cost, manufacturability, and functionality while ensuring compliance with FCC and regulatory standards.
- Engineered and validated electro-mechanical sensor housings to withstand shock, vibration, extreme temperatures, corrosion, and stringent IPx requirements in demanding vehicle underbody environments.
- Authored and maintained documentation for assembly procedures, test protocols, inventory control, incoming inspection, and engineering drawings in accordance with ASME Y14.5.

Mechanical Engineer 09/2018 – 09/2023

- Member of the founding team directly involved in bringing the first GPR sensor from prototype to product.
- Conducted tests to overcome critical design challenges to ensure the design's viability and robustness.
- Integrated prototypes and automotive sensors, including cameras, real-time GNSS systems, antennas, and electronics, into several development vehicles both in-house and on-site during customer-facing demos.

KARL STORZ Endovision, Inc. **06/2017 – 08/2017 (3 mo.)**
Mechanical Engineering Intern *North Attleborough, MA*

- Developed in-house automation for the fabrication of an internal component of medical endoscopes using SolidWorks and PLC-based motion control in an industrial machine shop.

EDUCATION

University of Massachusetts Amherst
Bachelor of Science in Mechanical Engineering – *Dean's List honors*

TECHNICAL SKILLS

Design

- SolidWorks (7+ yrs) + PDM
- ANSYS FEA
- Arena PLM (Empower, Windchill)
- MATLAB
- ASME Y14.5 GD&T
- DFMEA
- DVT (Shock/Vibration, Thermal, Corrosion)

Manufacturing

- Machining
- 3D Printing
- Sheet Metal Fabrication
- Plastics and Thermoforming
- Laser Cutting

Standards

- ISO 16750 – Road Vehicles
- ISO 26262 – Functional Safety
- ANSI B56.5 – Guided Industrial Vehicles
- FCC Part 15 – Radio Frequency Devices