Ryan Kim

New Jersey | 201-245-8979 | rdky404@gmail.com | linkedin.com/in/ryandki | rkydin.github.io | U.S. Citizen

Open to relocation and nationwide travel opportunities

Technical Skills

Mechanical Design: SolidWorks (parts, assemblies, drawings), GD&T (ASME Y14.5–2018, basic), DFM for machining/fabrication, basic tolerance stack-ups, sheet metal fundamentals, reverse engineering from legacy CAD
Prototyping & Assembly: Rapid prototyping, FDM 3D printing, bench assembly, fit/clearance checks, hardware/fastener selection
Programming: Python (OpenCV), C++, MATLAB, Simulink
Analysis: Basic FEA in SolidWorks; kinematics modeling in MATLAB
Testing & Documentation: Basic inspection (calipers), ImageJ, microscopy, engineering documentation
Software: SolidWorks, Microsoft Office

Experience

Robomekanics (OEM-Backed by Wild Iron) Nov 2025 – Present
Mechanical Engineer *Teterboro, NJ*

- Redesigning and improving the MoleIQ pallet-handling robot with full consideration for manufacturability, machining limits, material selection, and assembly order.
- Building production-oriented SolidWorks part and assembly models using clear design intent, proper mating structure, and tolerance control.
- Creating engineering drawings compliant with ASME Y14.5–2018, specifying datums, position/profile tolerances, and fit classes needed for reliable fabrication.
- Applying DFM principles by simplifying geometries, reducing machining steps, tightening stack-ups, and ensuring parts can be produced consistently across suppliers.
- Cleaning and repairing imported/legacy CAD to remove bad geometry, rebuild critical features, and standardize models for manufacturing workflows.
- Working directly with Wild Iron manufacturing engineers to validate tolerances, confirm machining feasibility, and release complete production-ready CAD packages.

ParaSwing – Robotic Golfing Attachment Sep 2024 – May 2025
Capstone Design Project *Rutgers University*

- Performed SolidWorks modeling and FEA to assess loading during swing impact and reinforce actuator mounts.
- Designed, 3D printed, and assembled mechanical subsystems for rapid prototyping.
- Integrated electrical and control components into a mechatronic system.
- Modeled swing kinematics in MATLAB to verify consistency.

Projects

Surgical-Inspired Robotic Arm Aug 2025 – Present
Personal Project *Self-Directed*

- Building an affordable robotic arm intended to mimic precise human arm movements through teleoperation.
- Designing multiple joints and linkages to reproduce key arm motions.
- Using differential gear sets for joint actuation and Bowden cables to drive a small end-effector gripper.
- Developing and prototyping the system in SolidWorks, C++, and 3D-printed components.

Real-Time Face Recognition with OpenCV May 2025 – Present
Personal Project *Self-Directed*

- Developed a Python desktop tool for real-time face detection and recognition using OpenCV.
- Built an enrollment workflow for capturing faces and generating encodings.
- Created an on-screen interface with labels, confidence scores, and user management.

Education

Rutgers University, School of Engineering New Brunswick, NJ
Bachelor of Science in Biomedical Engineering *Conferred May 2025*