Rehan Khan

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Portfolio: https://rehankh.me

Education

Bachelor of Science, Mechanical Engineering **May 2029**
Rose-Hulman Institute of Technology – Terre Haute, IN
Relevant Coursework: Introduction to Design, Graphical Communications, Statics & Mechanics of Materials I & II, Conservation & Accounting Principles, Electrical Systems & Lab, Computer Programming

Skills

Software: Fusion 360 (CAD/CAM), SolidWorks, KiCad, Python, Java
Fabrication: CNC Milling, Manual Lathe, Laser Cutting, 3D Printing, Carbon Fiber Layup, SMD Soldering

Leadership Experience

Rose Aerial Systems (SUAS) – *Structural Lead* **Sep 2025 – Present**
- Current structural development and manufacturing lead, designing airframe components in Fusion 360 and overseeing their fabrication.
- Manage the Fusion 360 hub for 25+ members on one of Rose's fastest-growing teams and train new members in CAD for future airframes.
- Fully designed the frame and mechanical layout of a prototype drone and helped build it from on-hand supplies, giving the software team an early test platform.
- Simultaneously coordinated early VTOL concept designs that evolved into the team's current aircraft.

Project Experience

Travel Xylophone – *EM 103 Introduction to Design, team of 4* **Mar 2026 – May 2026**
- Co-designed a folding xylophone in a 3D-printed, carbon-fiber clamshell with an integrated handle and tablet stand that closes to 11 × 11 × 3 in, meeting a 5 lb target at 4.95 lb.
- Sized 12 brass bars with beam vibration theory and hand-tuned every note to within ±10 cents.

Layered Airbrush Mural Stencils **May 2026**
- Filtered a grayscale image into five tonal SVG layers and laser-cut them as cardboard stencils.
- Airbrushed the layered stencils onto a wall to produce a realistic mural in under 5 hours.

Custom Keyboard **Jun 2025 – Aug 2025**
- Designed and fabricated a CNC-milled aluminum unibody keyboard case and aluminum keycaps.
- Engineered a custom PCB for DFM, including schematic design, key matrix layout, and firmware.

Custom Wireless Mouse PCB **Jun 2026 – Present**
- Redesigned the PCB shape and 4-layer layout in KiCad to fit the OEM Logitech G Pro X Superlight shell, adding contactless magnetic buttons and haptic feedback for improved performance and feel.
- Hand-assembling the board using stenciled solder paste and hotplate reflow of QFN and 0402 parts.
- Refined the design with professionals, resolving antenna, power, and clearance issues.

High School Leadership

FIRST Robotics, Ravenscroft School – *Team Leader, Lead Engineer* **Aug 2021 – May 2025**
- Led team to three straight state titles; designed three design-award-winning robots, two of which also won innovation awards.
- Planned in-school robotics events that grew the team by seven members in a single semester.

Innovation Lab, Ravenscroft School – *Assistant* **Aug 2024 – May 2025**
- Wrote equipment safety documentation and mentored underclassmen on shop tools and projects.

Personal Interests

Hiking, Wildlife Photography, Skateboarding, Snowboarding, Pickleball