

PARKER HONG

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EDUCATION

Northwestern University | Evanston, IL

Jun 2027

Bachelor of Science, Major in Manufacturing and Design Engineering, Minor in Architectural Engineering and Design

GPA 3.84/4.0

Achievements: High Honors Dean's List (Spring 2025), Dean's List (Fall 2024, Winter 2024, Spring 2024, Winter 2025)

Relevant Coursework: Mechanical Design and Manufacturing, Computer-Integrated Manufacturing, Electronics Design, Materials Selection, Mechanics of Materials, Quality Improvement by Experimental Design, Design Thinking and Communication, Smart Electronics in Design

ENGINEERING EXPERIENCE

Northwestern Formula Racing – Chassis Engineer

Sep 2025 – Present

- Design a carbon fiber composite steering wheel focused on enhancing ergonomics and driver experience.
- Collaborate with other sub-teams to create a fully functional electric vehicle optimized for performance.

Evanston Township High School – Architectural Engineer

Sep 2025 – Present

- Design a weather-resistant shelter for bicycle racks at the high school for student convenience and safety.

Segal Design Institute – Engineering Intern

Jun 2025 – Present

- Develop CAD models in SolidWorks and Onshape and fabricate physical prototypes using CNC, 3D printing, and machining equipment.
- Conduct biweekly design reviews with faculty and industry professionals, incorporating feedback into iterative design improvements.
- Strengthen rapid prototyping skills by transitioning digital concepts to functional prototypes, improving design-for-manufacturability.

Mechanical Design and Manufacturing Course

Mar 2025 – Jun 2025

- Designed and prototyped a brake caliper system in Siemens NX; manufactured with sintered Nylon-12 and validated on a bicycle.
- Performed finite element analysis (FEA) and topology optimization, reducing weight by 44% while maintaining structural integrity.

Design Thinking and Communication Course

Sep 2023 – Jun 2024

- Designed and constructed an elevated mobile nightstand, optimized for dorm room constraints, integrating electrical functionality.
- Created an assistive “money board” for adults with intellectual and developmental disabilities to facilitate independence in use of currency.

LEADERSHIP EXPERIENCE

Northwestern Crew | Evanston, IL

Varsity Men's Captain

May 2025 – Present

- Lead a 40+ member intercollegiate club rowing program, coordinating training, competitions, and team logistics.
- Serve as primary liaison between athletes, coaches, and administration.

Recruitment Chair

May 2024 – May 2025

- Increased athlete participation by 50% through targeted outreach, onboarding initiatives, and team-building events.

EMPLOYMENT EXPERIENCE

Northwestern University Residential Services | Evanston, IL

Sep 2024 – Present

Resident Assistant

- Promote a safe, inclusive living environment and act as on-call emergency responder for over 400 residents.
- Collaborate with security, health services, and administrators on incident management and community programming.

Evanston Township High School | Evanston, IL

Jun 2025 – Present

Assistant Rowing Coach

- Coach varsity athletes in technique, fitness, and strategy, driving team culture and performance.

Chicago Rowing Foundation | Chicago, IL

Summer 2024 & 2025

Assistant Coach

- Trained middle and high school athletes in the fundamentals of rowing, equipment care, and safety best practices.

Covenant Harbor | Lake Geneva, WI

Summer 2023 & 2024

Overnight Counselor

- Supervised and led daily activities for campers (grades 2-9), resolving conflicts and adapting to individual and group needs.

TECHNICAL SKILLS

CAD and Simulation: SolidWorks, Siemens NX, Onshape, ANSYS, AutoCAD, Rhino, Revit, WUFI

Programming and Analysis: MATLAB, Minitab, Python, Java, C, C++, Microsoft Office

Manufacturing and Prototyping: CNC Router, 3D Printing, Laser Cutting, Milling, Turning, Drilling, Soldering