

Hirsh Kabaria

hkabaria@umich.edu | (813) 766-2335 | [linkedin.com/in/hirsh-kabaria](https://www.linkedin.com/in/hirsh-kabaria) | US Citizen

EDUCATION

University of Michigan

Aerospace Engineering, Bachelor of Science in Engineering

Computer Science, Minor

3.6 / 4.0 GPA

Notable Classes: Dynamics and Vibrations, Aerodynamics, MATLAB Applications for Engineers, Aerospace Structures and Solid Mech

Honors and Memberships: ΣΤΤ Honor Society (Fundraising Lead '22-'23, Initiated Dec '21), Dean's List (Winter '20), AIAA (Since '20)

May 2024

Ann Arbor, MI

SKILLS

Engineering Administration: Project Management, Business and Government Relations, Team Leadership, Systems Engineering

Engineering: Finite Element Analysis (Ansys Mechanical), CAD (SolidWorks & NX w/ Teamcenter), MATLAB

Manufacturing: Manual Lathe, Composite Layup, Waterjet, Metal and CO2 Laser Cutter

Computer: C++, Java, Ubuntu, Adobe CC (Lightroom Classic, Photoshop, Premiere, Illustrator), MS Office Master Certification

EXPERIENCE

Michigan Aerospace Communications, Summer Assistant

University of Michigan Department of Aerospace Engineering

Summer 22

Ann Arbor, MI

- Created a narrative to present the best of Michigan Aerospace to our followers and share our values with the world.
- Raised morale and built a community through graphics, giveaway merchandise, and social media.

Nosecone and Recovery, Senior Engineer

Michigan Aeronautical Science Association (MASA) Rocket Team

Fall 21, Winter 22, Summer 22

Ann Arbor, MI

- Coordinated requirements, deadlines, funding, and designs between the nosecone, recovery, and airframe teams to facilitate nosecone attachment and separation as part of our recovery sequence.
- Laid up multiple couplers and airframes, delivering flight components ahead of schedule despite redesign due to equipment failures.
- Conducted full system testing and integration with deployment, including redesign of pyrotechnic bolt.

Tank Pressure Control Vibration Testing, Engineer

Michigan Aeronautical Science Association (MASA) Rocket Team

Summer 2022

Ann Arbor, MI

- Designed mounting hardware for high pressure systems with a resonant frequency out of the test range.
- Aided in the assembly of pressure systems, data recording, and test setup.

Business Division, Lead

Michigan Aeronautical Science Association (MASA) Rocket Team

Summer 21, Fall 21, Winter 22

Ann Arbor, MI

- Led a team of 5 to manage over \$100,000 in funding, design team merchandise, and oversee public relations.
- \$28,000+ raised in NASA and UMich grants, corporate sponsorships, and crowdfunding.
- 600% growth of the team's Twitter, Facebook, and LinkedIn pages through engaging visual content.
- Collaborated with NASA, airport, and local authorities to find a suitable liquid engine test site.
- Panelist at AIAA SciTech 2022 discussing student rocketry and the creation of the Academic Rocket Launch Alliance.

MACH 6, FEA and Structures Engineer

MACH AIAA Design-Build-Fly Team

Winter 22

Ann Arbor, MI

- Simulated loads on the wing box and motor mount and proposed a composite design for the motor mount to better survive given loads.
- Designed a one-step removable rear fairing for easy and quick access to the aircraft cargo bay during competition.

Fin Testing, Project Lead

Michigan Aeronautical Science Association (MASA) Rocket Team

Summer 21

Ann Arbor, MI

- Designed a rotating test stand for the fin can, allowing us to evaluate induced roll and fin loading in UM's 150 mph 5' x 7' wind tunnel.
- Met with fin team, wind tunnel management, and senior MASA engineers to determine requirements and timelines for wind tunnel testing.

Separation Mechanism, Engineer

Michigan Aeronautical Science Association (MASA) Rocket Team

Winter 21, Summer 22

Ann Arbor, MI

- Conducted FEA and multiple redesigns to ensure survival given significant bending moment loads on the nosecone-airframe interface.
- Ran trade studies to find the best COTS parts to ensure successful separation in an abort case.