Hirsh Kabaria

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EDUCATION

University of Michigan **May 2024**
Aerospace Engineering, Bachelor of Science in Engineering Ann Arbor, MI
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: ΣΓT Honor Society (Initiated Dec '21), Dean's List (Winter '20), AIAA (Since '20)

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
Computer: C++, Java, LabVIEW, Ubuntu, Adobe CC (Lightroom Classic, Photoshop, Premiere, Illustrator), MS Office Master Cert
Photography: Journalism, Sports, Events, Portrait, Film

Engineering Portfolio: https://medajor.github.io/Hirsh%20Kabaria_Portfolio-2022-02-01.pdf
Photography Portfolio: https://www.flickr.com/people/hirsh_kabaria/

EXPERIENCE

Lead, Business Division **May 2021 – Present**
Michigan Aeronautical Science Association (MASA) Rocket Team Ann Arbor, MI

- Leading 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.

Project Manager, Aerodynamics and Recovery **August 2020 – Present**
Michigan Aeronautical Science Association (MASA) Rocket Team Ann Arbor, MI

- Coordinating requirements, deadlines, funding, and designs between the nosecone, recovery, and airframe teams to facilitate nosecone attachment and separation as part of our recovery sequence.
- Synchronized multiple teams to deliver the electrical box for our ground support equipment in a two-week timeframe, optimizing the internal placement of boards, lighting, and power while maintaining waterproofing.
- Designed a Fin Test Stand to validate fin tolerances and roll rate in a 150 mph 5' x 7' wind tunnel.
- Conducted FEA and trade studies to optimize design of former separation mechanism to ensure survival given significant bending moment and abort case considerations.
- Worked on 3 design reviews, currently establishing timelines for fins and nosecone as part of the aerodynamics team.

Photojournalist **August 2020 – Present**
Michiganensian Yearbook Ann Arbor, MI

- Photographing campus athletics, life, and events, as well as stock photos and portraits for the official yearbook of the University of Michigan, now in its 126th edition.
- Notable Assignments: Glass Animals Concert, Michigan Football, Graduate Employee Strike, Michigan Women's Basketball

PROJECTS

- Collaborated with a team of 4 to propose a design for and simulate a drone delivery system for use in a large machine shop.
  - Designed a mock factory floor in SOLIDWORKS and imported it into the simulation software.
- Implemented a Finite Element Difference Solver in MATLAB to simulate heat flow in a rod using partial differential equations.
- Used the Monte Carlo method of flipping neurons to create a network trained in optical character recognition using MATLAB.
- Organized an outreach event to local high schoolers teaching resume writing and answering questions about STEM in college.
- Simulated forces on a wing spar and box in Ansys for UMich's AIAA Aircraft Design-Build-Fly team, MACH.