Hirsh Kabaria

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# EDUCATION­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_­­

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| **­­****University of Michigan** | **May 2024** |
| Bachelor of Science in Engineering in Aerospace Engineering | Ann Arbor, MI |

Minor in Computer Science

GPA: 3.6

Notable Classes: Intro to Solid Mechanics and Aerospace Structures, Intro to Gas Dynamics, MATLAB Applications for Engineers

SKILLS\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Engineering Administration:** Systems Engineering, Corporate and Government Relations, Team Leadership, Timeline Management

**Engineering:** Finite Element Analysis (Ansys Mechanical), CAD (SolidWorks & NX), MATLAB, Manufacturable Design, Procurement

**Computer:** C++, Java, Ubuntu, Adobe CC (Lightroom Classic, Photoshop, Premiere, Illustrator, InDesign), Microsoft Office Master Cert

**Photography:** Journalism, Sports, Events, Portrait, Film

* Portfolio: <https://www.flickr.com/people/hirsh_kabaria/>

EXPERIENCE\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **Michigan Aeronautical Science Association (MASA)** | **August 2020 – Present** |
| Business Lead (2021-Present) | Ann Arbor, MI |

* Managing over $100,000 in funding, with experience in grants, corporate relations, sponsorships, and crowdfunding. Achieved >600% growth in social media reach on Instagram and Twitter.
* Lead of a team developing a composite separation mechanism to survive supersonic flight and ensure rocket recovery.
* Worked with multiple teams to coordinate the layout of our ground support equipment electrical box and optimize 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 and ensure survival given significant bending moment and abort case considerations.
* Worked on 3 design reviews and currently establishing timelines for fins and nosecone as part of the aerodynamics team.

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| **Michiganensian Yearbook** | **August 2020 – Present** |
| Staff Photographer | ­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

CLASS PROJECTS\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Drone Simulation: Worked with a team of 4 to simulate a drone delivery system in a custom simulation environment.
  + Designed a mock factory floor in SOLIDWORKS and imported it into the simulation software.
* FED Solver: Implemented a Finite Element Difference Solver in MATLAB to simulate heat flow in a rod using PDEs.
* Neural Network: Used the Monte Carlo method of flipping neurons to create a network trained on letters in MATLAB.