JONATHAN F. KOFMAN

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EDUCATION

Northeastern University, Boston, MA 4.0 GPA
Master of Engineering, Advanced and Intelligent Manufacturing Expected: May 2026
Relevant Coursework: Integrated Automation, Digital Manufacturing, CAD/Machining, Modern Control Systems

Rutgers University, New Brunswick, NJ
Bachelor of Engineering, Aerospace Engineering May 2024
Relevant Coursework: Aircraft Flight Dynamics, Aerospace Propulsion, Compressible Fluid Dynamics, AutoCAD, Mechatronics, Aerodynamics

RELEVANT SKILLS

Mechanical: Developed 6-Stage Coil gun using 400V and custom PCBs with DC-DC converter, Actuators, Motors, Electro/optomechanical integration for prototype, SLA and FDM printing, CNC Vertical Mill and CNC Lathe (HAAS machines), TIG welding, Automotive Repair, Passed Mechanical Engineering FE Exam

Software: CAD and ECAD software, CFD and FEA analysis, ANSYS, MATLAB/SIMULINK, Python, Data Management/Visualization, Tableau

Management: Microsoft Products, Bi-lingual (English and Russian), Bill of Materials, Report Writing, Prompt Engineering, Time Management, High-Level Problem-Solving Skills, Root Cause Analysis Tactics

LEADERSHIP EXPERIENCE

Northeastern Aerospace Propulsion Team, Boston, MA

Member, Propulsion August 2024 – Present

- Designed injector, nozzle, and combustion chamber for suitable mixing of Kerosene and Liquid Oxygen
- Machined bulkheads and planned out CNC path to machine injector using SolidWorks CAM software
- Developed part drawings to ensure proper Geometric Dimensioning and Tolerance
- Crafted an SOP to allow for preliminary testing of Ablative 93-104 material to char and prevent burning of the combustion chamber at over 2000 degrees Fahrenheit
- Performed FEA analysis on injector components to ensure there are no stress fractures that can occur during deployment

Rutgers Scarlet Flight, New Brunswick, NJ

Team, Financial and Propulsion Lead, May 2023 – Aug 2024

- Led propulsion analysis which included creating a test stand to hold the rocket body in place to perform thrust testing, optimizing body and nozzle design using SolidWorks for optimal flow, which was simulated using ANSYS, and finding the optimal launch pressure to ensure no failure to rocket while optimizing the maximum altitude
- Used SLA and FDM 3D printing to create lightweight but durable nosecone, fin holder, bulkheads, and electronic bay holder
- Projected to break the unofficial world record (1300ft) for Class B multi-stage pressurized water rockets according to WRA2 using MATLAB software by 255 feet

Rutgers FSAE Racing Team, New Brunswick, NJ

Member, Aerodynamics Oct 2020 - Aug 2024

- Coordinated in aerodynamic design using SolidWorks and ANSYS to perform lift and drag tests utilizing set parameters which included Angle of Attack, Velocity, Temperature, and Provided load
- Performed ANSYS CFD and FEA over the front and rear wing as well as the front and rear diffusers to create the optimal design with cornering and downforce being the main priority
- Created Bill of Materials for aerodynamic features including front/rear wing, front/rear diffuser, and side skirts
- Utilized injection molding techniques to fabricate different components such as prototype wings for front and rear of the car
- Integrated HV disconnects to main accumulator to disrupt power in case of emergency, additionally helped electrical team assemble wiring harness connecting different sub-components of the car