Kavin M. Govindarajan

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EDUCATION

NORTH CAROLINA STATE UNIVERSITY

BS Aerospace Engineering
BS Applied Mathematics
Expected May 2024 | Raleigh, NC
GPA: 4.0 / 4.0
Park Scholar
Dean's List (All Semesters)

COURSEWORK

AEROSPACE ENGINEERING

- Engineering Dynamics *(Spring 2022)*
- Solid Mechanics *(Spring 2022)*
- Aerodynamics *(Spring 2022)*
- Aerospace Vehicle Performance
- Engineering Statics
- Intro to Aerospace Engineering
- Intro to Computing - MATLAB
- Foundations of Graphics (CAD)

APPLIED MATHEMATICS

- Mathematical Foundations of Data Science *(Spring 2022)*
- Methods of Applied Mathematics
- Mathematical/Real Analysis
- Introduction to Modern Algebra
- Linear Algebra
- Applied Differential Equations
- Probability & Statistics
- Foundations of Advanced Mathematics

SKILLS

Programming/Software:
C • C++ • Java • Python • MATLAB • Simulink • OpenCV • Linux (Ubuntu, Raspbian) • Microsoft Office • LaTeX• JIRA • Confluence • Git
CAD:
Solidworks • Autodesk Fusion 360 • Siemens NX • GrabCAD

LINKS

Github:// **kmgovind**
LinkedIn:// **kmgovind**
Website:// **kmgovind.github.io/DigitalPortfolio**

EXPERIENCE

MAE CORE LAB | Research Assistant

June 2019 - Present | Raleigh, NC

- Developing novel persistent-planning algorithms for renewably-powered vehicles in spatiotemporally-varying environments.
- Designed and built composite control surfaces and electronics modules for autonomous sailing drones.
- Designed a ROS-based communication protocol for interfacing with RF-based communication hardware for use on autonomous sailing drones.

Technologies: MATLAB, Simulink, ROS, Solidworks, Git

LIQUID ROCKETRY LAB | CFO & Structures Engineer

September 2020 - Present | Raleigh, NC

- Managing financial and legal responsibilities for the organization.
- Developing dynamic model to derive optimal design parameters and design flight control system.
- Designing components for guidance, navigation, and control (GNC) of rocket.

Technologies: MATLAB, Java, Siemens NX, JIRA, Confluence, Git

NASA L'SPACE MCA | Engineering Team (GNC & Power Systems)

May 2021 - August 2021 | Virtual

- Developed lunar rover concept for the sampling of possible ice water reservoirs on lunar south pole.
- Developed preliminary design review and presented concept to NASA engineers for review.
- Designed GNC and power systems for lunar rover concept.

Technologies: MATLAB, Simulink, ROS, Solidworks

FRC 6908 INFUZED | Mentor

August 2020 - Present | Cary, NC

- Managed operations of the nonprofit and provided hundreds of students in the RTP-area with equitable access to STEAM education.
- Established a lasting relationship with local companies, earning over $100k in sponsorship/support.

Team Captain/Chief Engineer

August 2017 - May 2020 | Cary, NC

- Headed design and fabrication of robots for competition.
- Developed software to utilize a camera input along with computer vision libraries to optimize autonomous movement in relation to a target.

Technologies: Solidworks, Java, OpenCV, Git

PUBLICATIONS

Coverage-Maximizing Solar-Powered Autonomous Surface Vehicle Control for Persistent Gulf Stream Observation
Accepted | American Control Conference

PROJECTS

Detailed summaries available at my website

Information-Based Path-Planning **Technologies:** MATLAB
Computer-Vision Aided Robotics **Technologies:** Java, Python, OpenCV