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
- Dynamics & Controls *(Fall 2022)*
- Mechatronics *(Fall 2022)*
- Engineering Dynamics
- Solid Mechanics
- Aerodynamics I
- Aerospace Vehicle Performance
- Engineering Statics

APPLIED MATHEMATICS
- Dynamic Systems & Multivariable Control *(Fall 2022)*
- Mathematical Foundations of Data Science
- Methods of Applied Mathematics
- Mathematical/Real Analysis
- Introduction to Modern Algebra
- Linear Algebra
- Applied Differential Equations
- 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
Renewably-Powered Robotics
- 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

DARPA Manta Ray
- Developed and implemented embedded control system.
- Headed sensor integration into control system.

Technologies: C, C++, ROS, 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

PUBLICATIONS

Coverage-Maximizing Solar-Powered Autonomous Surface Vehicle Control for Persistent Gulf Stream Observation
American Control Conference 2022 | Atlanta, Georgia

PROJECTS

Detailed summaries available at my website

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

ACTIVITIES

FIRST Robotics Team 6908	**Role:** Mentor
InspireNC Non-profit	**Role:** Director