

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

PROJECTS

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 structural components for guidance, navigation, and control (GNC) of liquid-powered 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

INSPIRENC | DIRECTOR

July 2018 - 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.

FRC 6908 INFUZED MENTOR

August 2020 - Present | Cary, NC

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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.

PUBLICATIONS

Coverage-Maximizing Solar-Powered Autonomous Surface Vehicle Control for Persistent Gulf Stream Observation

Accepted | American Control Conference

Detailed summaries available at my website

Information-Based Path-Planning

Computer-Vision Aided Robotics

Remote-Controlled Car

Technologies: MATLAB

Technologies: Java, Python, OpenCV

Technologies: C, C#, Arduino