



Vivek T.

Aerospace Engineer

Research Interests: UAV design, Combustion in high-speed flows

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06 June 1997
VivekThazhathattil

TECHNICAL SKILLS

| | |
|---------------------------------|--------------------------------|
| C/C++ Expert | Python Expert |
| MATLAB/Octave Expert | HTML/CSS Proficient |
| JavaScript Proficient | Java Intermediate |
| BASH Intermediate | ReactJs Intermediate |

LANGUAGES

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| Malayalam Native | English Fluent |
| Hindi Intermediate | |

ACHIEVEMENTS

24th rank in GATE, 2019 August 2019
GATE, MHRD
Managed to secure 24th rank in Graduate Aptitude Test in Engineering (GATE) in Aerospace Engineering with an overall score of 799/1000.

99.4 percentile in IIT-JEE 2015 June 2015
CBSE
Achieved 99.4 percentile in IIT-JEE Mains, 2015 and qualified the JEE Advanced exam, the UG entrance exam for admission into IITs.

50th rank in KEAM, 2015 June 2015
CEE, Govt of Kerala
Secured 50th rank in Kerala Engineering Architecture Medical entrance examination out of more than 90,000 students. Scored 862/960 marks.

8th rank in RAYS Young Genius Award, 2013 August 2013
RAYS institution
Secured 8th rank in RAYS Young Genius Award program for excellence in academics.

EDUCATION

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| Indian Institute of Science (IISc), Bangalore Master's Degree Aerospace Engineering | (August 2019 - August 2022) 8.0 |
| Currently in the third semester. | |
| Indian Institute of Technology Kanpur Bachelor's Degree Aerospace Engineering | (January 2015 - August 2019) 7.0 |
| Vijayagiri Public School, Chalakudy XII (CBSE) | (June 2013 - June 2015) 95.6% |
| Silver Hills Public School, Kozhikode X (CBSE) | (June 2012 - June 2013) 95% |

PROJECTS

B.Tech Project: Conceptual Design of a Twin-Boom Fixed-Wing VTOL UAV (May 2019 - July 2019)

- Thesis supervisor: Prof. Ajoy Kanti Ghosh, IIT Kanpur
- Conceptually designed a twin-boom fixed-wing VTOL UAV satisfying a set of mission requirements.
 - Stability and control analysis performed, along with a study of flight envelope, wind and gust effects, and spin recovery.
 - Installation of a Satellite Communication On the Move (SOTM) explored, with the consideration of drag to optimize the SATCOM's wetted area.
 - Deployment of parachute recovery system studied in detail, including material selection, size estimation and effectiveness.

AE203 Course Project: Conceptual design of n+3 generation turbofan engine (November 2019 - December 2019)

- Course supervisor: Dr. Pratikash Panda, IISc
- involved calculation and tabulation of air properties, enthalpy and entropy as a function of temperature (200K - 1000K)
 - selected and evaluated performance of two different engines at SLTO.
 - Off-design performance evaluated at cruise and idle-conditions.

OpenAI Taxi-V2 implementation in C++ (April 2021 - May 2021)

- Implemented OpenAI Taxi-V2 from scratch in C++ with graphical environment powered by SFML (Simple and Fast Multimedia Library).
- Uses Q-learning (reinforcement learning) to arrive at the solution.
- added support for reward table generation and save states.