

# Vivek T.

Portfolio: [vivekthazhathattil.github.io/portfolio](https://vivekthazhathattil.github.io/portfolio)

Github: [github.com/VivekThazhathattil](https://github.com/VivekThazhathattil)

Email: [vivek.thazhathattil@gmail.com](mailto:vivek.thazhathattil@gmail.com)

Mobile: +91-9151619496

## EDUCATION

Degree/Certificate	Institute/Board	CGPA/%	Year
M.Tech Aerospace Engineering	Indian Institute of Science, Bangalore	8.0/10.0	2022 (expected)
B.Tech Aerospace Engineering	Indian Institute of Technology, Kanpur	6.9/10.0	2019
Intermediate (+2)	Vijayagiri Public School, Thrissur, Kerala (CBSE)	95.6%	2015
Matriculation	Silver Hills Public School, Kozhikode, Kerala (CBSE)	10.0/10.0	2013

## SCHOLASTIC ACHIEVEMENTS

- **GATE-2019:** Secured **All India Rank 24** Graduate Aptitude Test in Engineering (GATE) in Aerospace Engineering in 2019.
- **IIT-JEE Mains 2015:** Achieved **99.4 percentile** in IIT-JEE Mains 2015 to qualify for JEE-Advanced examination.
- **KEAM-2015:** Secured **50th Rank** in Kerala Engineering Architecture Medical Entrance Examination, 2015 out of more than **90,000 students**.

## WORK EXPERIENCE

- **Stockzo - Fintech startup** Remote  
*Web Developer (Intern)* *July 2022 - Sep 2022*
  - **Web development:** Development of responsive website and related APIs for Stockzo, a fintech startup focusing on portfolio management and discount broking.
  - **Firestore Database:** Used the Firestore Realtime Database and Firestore Cloud Functions as the backend to push the order to database.
- **Sanfoundry - Sanfoundry's Global Learning Initiative** Remote  
*Research and Development (Intern)* *May 2019 - Aug' 2019*
  - **Technical writing:** Technical content accumulation related to the topic of rocket propulsion.
  - **Supervision:** Active participation to monitor timeline of submission and review of the work.
  - **Team work:** Assist the team in uploading the approved content for publishing.

## PROJECTS

- **Conceptual Design of a Twin-Boom Fixed-Wing VTOL UAV** *May 2019 - July 2019*  
**Mentor: Prof. Ajoy Kanti Ghosh**, Department of Aerospace Engineering, IIT Kanpur.
  - Designed a VTOL UAV under challenging mission constraints.
  - performed stability and control analysis, along with a detailed study of flight envelope, wind and gust effects and spin recovery.
  - Explored the viability of installation of a Satellite Communication On The Move (SOTM), with consideration of drag optimization of SATCOM's wetted area.
  - Deployment of a parachute recovery system studied, which included material selection, size estimation and effectiveness calculation.
- **OpenAI Taxi-V2 implementation in C++** *April 2021 - May 2021*
  - Implemented a Q-learning model from scratch to make an AI agent learn to pick up passengers and drop them off at their destinations while minimizing the time cost.
  - Visualized the model using SFML library.
  - added support for reward table generation and save states.
- **Conceptual design of n+3 generation turbofan engine** *Nov' 2019 - Dec' 2019*  
**Mentor: Prof. Dr. Pratikash Panda**, Department of Aerospace Engineering, IISc Bangalore.
  - Calculation and tabulation of air properties, enthalpy, and entropy as a function of temperature (200K - 1000K).
  - Selection and evaluation of performance of two different engines at SLTO.
  - Off-design performance evaluation at cruise and idle-conditions.

## SKILLS SUMMARY

<b>Languages</b>	C/C++, Java, Python, JavaScript, SQL, Bash, JAVA, GDScript, HTML/CSS
<b>Frameworks/Libraries</b>	Scikit, NLTK, SpaCy, TensorFlow, Keras, Django, Flask, NodeJS, MERN, React, Redux
<b>Tools</b>	Docker, Git, PostgreSQL, MySQL, SQLite, L <sup>A</sup> T <sub>E</sub> X, MATLAB, Octave, Android Studio, Godot
<b>Platforms</b>	Windows, Linux Debian/Arch, Mac, Arduino, Raspberry, AWS, GCP, IBM Cloud, GitHub/GitLab, Netlify, Heroku

## VOLUNTEER EXPERIENCE

- **Volunteer for Notebook Drive-IISc** Bangalore, India  
*Coordinated events promoting quality of education for underprivileged students in schools near IISc.* *Oct' 2019*