TheLethalCode
TheLethalCode (Codeforces)
TheLethalCode (CodeChef)

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Education

2017-2022 (Expected)	B.Tech + M.Tech (Dual degree) in **Computer Science and Engineering** Indian Institute of Technology, Kharagpur	**GPA:** 9.33/10.0 (* Ongoing)
2015-2017	Higher Secondary School Certificate Examination, **CBSE** Maharishi International Residential School, Kancheepuram	**Percentage:** 96%

Technical Skills

Programming Languages	C, C++, Python, GoLang, JavaScript, Julia
Libraries / Frameworks	ROS, Selenium, STL, OpenCV, Numpy, Requests, Flask
Databases	MySQL, SQLite
Systems / Platforms	Linux, Docker, Android, Windows, Git
Others	Bash, Latex, Solidworks

Research Experience

Feb 18 Present — **Artificial Intelligence Team Member** — **Autonomous Ground Vehicle Research Group**

- Working as a software stack team member, tackling the various challenges faced to model a complete autonomous vehicle capable of traversing dynamic environments.
- Working on the various aspects of path planning from a source to one or more destinations through an ever-changing surrounding and their run-time optimization.
- Working on a high accuracy lane detection module for an outdoor environment with unfavourable conditions.

Projects

- **DigiCon, OpenSoft 2018 IIT Kharagpur**
  This web application accurately parses and mines the contents of a hand-written doctor's prescription and segregates the medicines along with their doses while checking for possible errors and lists them out in a more readable fashion.
- **Hybrid A-Star & DWA, Path Planning Algorithms**
  Improved, parallelized and novel implementation of the conventional Hybrid A-star global path planner allowing for kinetic constraints of the bot, capable of running at 7Hz in a moderately populated environment. An enhanced objective function realized for the Dynamic Window Approach local path planner which results in a shorter path traversal time.
- **Eklavya 6.0, Intelligent Ground Vehicle Competition (IGVC) 2018**
  A robot capable of intelligently traversing an obstacle ridden course with the help of visual and sensory input. The bot took part in the **IGVC 2018** and bagged the 2nd place.
- **Artemis' Arrow, A Web Application**
  A web app that tries to retrieve various forms of entertainment such as songs, books, anime from throughout the web and offers it at a single place while offering multiple user customizations and features.
- **BrkOut, A game made using PyGame**
  An interactive game that incorporates real time collision and momentum conservation in a graphical interface made using Pygame in Python. It also uses a basic encryption which emphasizes the prison-breaking theme of the game.

Related Courses

*** Currently Studying**

- Programming and Data Structures
- Algorithms and Data Structures
- Discrete Structures
- Software Engineering*
- Formal Language&Automata Theory*
- Probability and Statistics*
- Switching Circuits*
- Computer Vision*
- Introduction to Machine Learning*

Interests

Algorithms and Data Structures, Machine Learning, Computer Vision, Number Theory, Cryptography and Networking.

Achievements & Involvements

- **Kharagpur Winter of Code -** One of the organizers of the five week long GSOC-styled Open Source Program and an active mentor of one of the projects in it. Responsible for the development and maintenance of the KWOC website.
- **Programming Societies -** Co-founder of **CodeStash, IIT KGP** and Core-Team Member of societies such as **Kharagpur Open Source Societies** and **CodeClub** where we help to capture, nurture and preserve the programming zeal that bubbles among the budding KGP students by organizing workshops, hackathons, fests, etc.
- **Scholastic Achievements**
  - **AIR 322 - JEE Advanced** (99.8 percentile)
  - **AIR 1784 - JEE Mains** (99.8 percentile)
  - Twice **Kishore Vaigyanic Protsahan Yojana (KVPY)** Scholar