SANJAY SUKUMARAN

Junior Undergraduate | Department of Computer Science and Engineering IIT Kanpur

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EDUCATION

IIT KANPUR   B.TECH, COMPUTER SC. & ENGG.
CPI: 9.22/10   **2019-Present**

St Antony's Public School,Kottayam   Grade XII (CBSE)
Percentage: 97.2%   **2019**

Jawahar Navodaya Vidyalaya, Kannur   Grade X (CBSE)
CGPA: 10/10   **2017**

TECHNICAL SKILLS

- **Programming:** C/C++, Python, Javascript , Haskell
- **Exposure:** Verilog, Bash
- **Utilities:** HTML, CSS, Git, LaTeX, Postman
- **Frameworks and Libraries:** ReactJS, ExpressJS, NodeJS, mongoDB, ROS, OpenCV, Gazebo , NumPy

PROJECTS

MERN Full stack web app for sharing places
Course Project, MERN Fullstack Guide

- Implemented front end of a web app in **ReactJS**,where users can login,share and view places.
- Built various APIs using **NodeJS** and **ExpressJS**,and used **mongoose** to connect to the **mongoDB** database.

Building GemOS

- Implemented **pipe**,and **persistent pipe** related syscalls in gemOS.
- Implemented **clone** syscall for **thread creation** and other thread related functionalities which supports **memory allocation** and **freeing**,and **private fault handling**.
- Implemented basic **debugger** which supports **creation** ,**removal** of breakpoints and getting **information** about the breakpoints in gemOS.

JS projects

- Built a web chat application using **NodeJS**,**socket.io**,**HTML** and **CSS**
- Implemented tic-tac-toe and Connect-Four games using **HTML**, **CSS** and **Javascript**.

Autonomous Navigation in Rough Terrain Environments
Summer Project, Robotics Club IITK

- Implemented a complete **navigation stack** on a **six-wheeled rover** in **Gazebo** simulation.
- Implemented **GPS** and **position controllers**, **ArUco** marker detection, **LiDAR**-based **obstacle avoidance** and **path planning** for the rover .

ACHIEVEMENTS

Academic Excellence Award   April 2020
for exceptional performance in the academic year 2019-20.

AIR 1042   June 2019
JEE - Advanced, among 161,000+ candidates.

AIR 422   May 2019
JEE - Mains, among 958,000+ candidates.

Rank 4   June 2019
Kerala Engineering Architecture Medical(KEAM) Examination, among 90,000+ candidates.

AIR 377   Apr 2019
Kishore Vaigyanik Protsahan Yojana (KVPY) 2018- SX, conducted by IISc Bangalore.

Competitive Programming:

- Stood 46th,63rd in **Codeforces 760 ,762 Div 3** round respectively among 15,000 participants worldwide
- Stood 12th in **Codechef Starters 15 Div 2** round among 3,200 participants worldwide
- Stood 7th in **Codechef Snackdown Elimination Parallel Div 1** round among participants worldwide.
- Stood 789th,837th,1612th in **Google Kick-Start 2021 Round G,D,C** respectively ,among around 11,000 participants worldwide.
- Codeforces **Max Rating: 1751 (Expert)**
- Codechef **Max Rating: 2173 (5 Star)**

RELEVANT COURSEWORK

- Deep Learning for Computer Vision(*Ongoing*)
- The MERN Fullstack Guide *(Online Course)*
- Compiler Design(*Ongoing*)
- Introduction to Machine Learning
- Operating Systems
- Computer Networks
- Software Development And Operations
- Data Structures and Algorithms
- Fundamentals of Computing
- Computer Organisation
- Probability for Computer Science
- Introduction to HTML5 *(Online Course)*

RESPONSIBILITIES

Team Member
Aerial Robotics IITK | Dec '19 - Dec '20

- Part of **software** subteam of a team of 10 students working on solutions of industrial problems using **Aerial Vehicles**.