Abhishek Pachorkar

Sophomore @ Mathematics and Computing, IIT Kharagpur

EDUCATION

INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR
Integrated M.Sc in Mathematics and Computing
CGPA: 8.40/10
2018-2023 | West Bengal, India

MAHARASHTRA STATE BOARD OF SECONDARY EDUCATION
Higher Secondary Education Certificate Examination
Percentage: 85.08%
May 2018 | Nasik, Maharashtra, India

MAHARASHTRA STATE BOARD OF SECONDARY EDUCATION
Secondary School Certificate Examination
Percentage: 94.40%
May 2016 | Nasik, Maharashtra, India

CONTACT

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LINKS

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COURSEWORK

T - Theory | L - Laboratory

Completed
Programming & Data Structures (T/L)

Design & Analysis of Algorithm (T/L)

Ongoing
Discrete Mathematics (T)

Educational Data Analytics
Online Courses
Machine Learning - Andrew Ng
Algorithms Specialization (Ongoing)
deeplearning.ai (Ongoing)

PROJECTS

AERIAL ROBOTICS KHARAGPUR Software Team Member

- Aerial Robotics Kharagpur is a research group mainly involved in the development of autonomous drones performing various tasks.
- Part of a software team which worked on ORB-SLAM (Simultaneous Localisation and Mapping) which is an indoor localisation algorithm for drones.

BOOK MY MOVIE General Championship OpenSoft

- Developed Backend for an API which facilitates communication between costumer and theatre owners. Backend was developed using Python-Flask.

CRUSADE Kshitij 2019 Challenge

- *Problem Statement*: Used a monocular camera to guide a bot through grey-scale environment.
- Executed different approaches using Python-OpenCV functions to extract exact path boundaries including implementing generalized Huff Transform and contour detection using gradients.
- Used the path boundaries to estimate state of bot and required control inputs to guide it to destination.

PATH PLANNING USING RRT* ALGORITHM ARK Task Round

- Optimized multiple data structures and path-finding algorithms such as RRT*(Rapidly-exploring random trees) to find a solution for a given dynamic maze with moving obstacles in random motion. Implemented it in C++ using OpenCV.
- Developed a new algorithm to plot disparity map of two stereo images and applied it to plot depth gradients .

TECHNICAL SKILLS

Programming Languages	C | C++ | Python | Java | GNU Octave
Libraries / Frameworks	OpenCV | Numpy | flask
Robotic and Control Systems and Platforms	ROS | Solidworks | Simulink Git | Linux
Others	HTML | CSS | MySQL

SCHOLASTIC ACHIEVEMENTS

- *Inspire Scholarship*: Among the top 1% students in the country to receive the scholarship for academic prowess.
- JEE Advanced *AIR 3359*: Under top 1% amongst more than 2,00,000 students
- JEE Main *AIR 249*: In top 0.02% amongst more than 12,00,000 students.
- Secured Bronze Medal in Homi Bhabha Bal Vaidnyanik Science Talent Competition
- Among Top 10% in National Standard Examination In Junior Science Examination
- Mentored in IEEE certified workshop for image processing
- Secured best algorithm award in Nexus event at Khitij 2020