ARKAJYOTI BASAK

+91-9051-902-862

GitHub : iamarkaj

arkajbasak1211@gmail.com

EDUCATION

Thapar Institute of Engineering and Technology   Patiala, India
Bachelor of Technology in Mechanical Engineering   2018 - 2022 (Expected)

WORK EXPERIENCE

Google Summer of Code - JdeRobot, Student Developer   May'21 - Aug'21
JdeRobot develops framework based on ROS, Docker & Django to simplify learning robotics/CV

- Built the RADI-3.1 (Robotics Academy Docker Image) for ROS1 Noetic.
- Migrated 18 RoboticsAcademy exercises from ROS1-Melodic to ROS1-Noetic.
- Extended 9 RoboticsAcademy exercises from ROS node to web-based template.
- Improved the platform and fixed existing bugs. Became one of the top 4 contributors.
- Python, C++, ROS, HTML/CSS, VanillaJS, Docker

La Fondation Dassault Systèmes, Industry Internship Program — India   Feb'21 - Aug'21

- Designed and analyzed a foldable motorcycle helmet.
- 3DEXPERIENCE, SOLIDWORKS, xDesign, SIMULIA

PERSONAL PROJECTS

Machine Learning

- **AI Learns to Park**: Developed a self-improving car parking game.
- **Drone Mapping**: Developed a GUI application to control a drone in Gazebo simulator.
- **Split & Rephrase model**: NLP model that can break long sentences into short multiple sentences.

Engineering Design

- CAD Modelling, & analysis of Crankshaft of HONDA-GX160 Engine.
- CAD Modelling, static analysis, & optimization of a glass bottle.
- Kinematic analysis, & redesign of a 4-bar mechanism.

TECHNICAL SKILLS

Programming:	Python, C++, Bash
Robotics tools:	ROS, Gazebo, Unity 3D
ML Frameworks:	OpenCV, PyTorch, TensorFlow
3D Softwares:	SOLIDWORKS, Ansys, PTC Creo, Blender
Web/Deployment tools:	HTML, CSS, VanillaJS, Docker
Controllers/Modules:	Arduino, NodeMCU
Operating System:	Linux (Ubuntu preferred), Windows

POSITION OF RESPONSIBILITY

Member of JdeRobot and maintainer of RoboticsAcademy exercises

PROFILES

HackerRank: arkaj (Python 5*, C++ 5*)   **LeetCode**: arkaxdevil

INTERESTS

Robots, Reinforcement learning, ROS Control, Data Structures & Algorithms, Problem Solving, CAD