

Academics

2017-2021	<i>Bachelor of Technology</i> in Computer Science and Engineering, IIT Kharagpur
GPA	9.68/10.0 (Currently Pursuing)
2017	<i>Higher Secondary School Certificate Examination (CBSE), St. Columba's School</i>
GPA	97.4%

Work Experience & Projects

May 19- Current	University of Washington Research Intern: Personal Robotics Lab - Guide: Prof. Siddhartha Srinivasa - Building efficient algorithms for computing shortest-paths for the Multi-Agent Pathfinding problem and implementing them on a bi-manual arm space. - Research Areas: Graph Space Planning, Multi-Agent Pathfinding, Conflict Based Search
Mar 18- Current	Artificial Intelligence Team Member: Kharagpur RoboSoccer Research Group Guide: Prof. Jayanta Mukhopadhyay - Research Objective: To build and study cooperative multi-agent systems in dynamic adversarial environments. - Regularly participates in RoboCup: An initiative with the goal to advance the state of the art of intelligent robots. - Created a GUI that integrates the GrSim (Simulator for RoboSoccer SSL) and our fsm architecture based codebase using PyQt and ROS.
Feb 19- Apr 19	J.A.R.V.I.C. : Just A Rather Very Intelligent Chatbot Guide: Prof. Debasis Samanta - Developed an automated conversational agent that classifies the emotion of the user and forms replies based on the predicted emotional state of the user. - Used Seq2Seq and Bayesian Classifier for front end and an android based application created using Android Studio and Java Socket Programming for back end. - Research Areas: Automated Chatbot, Cognitive Behavioural Therapy, Natural Language Processing
Dec 18- May 19	Deep Learning rooted Potential Piloted RRT* for expeditious Path Planning - Used Deep Learning to bias a Potential Function Based- RRT(Rapidly-exploring Random Trees)-Star algorithm for single-query path planning problems that incorporates the Artificial Potential Field algorithm in RRT*. - Published at International Conference on Artificial Intelligence and Robotics, 2019. - Research Areas: Deep Learning, Path Planning, Probabilistic Algorithms

Scholastic Achievements

- **IITJEE Mains, All India Rank 756:** In top 0.07% amongst more than 11,00,000 students.
- **IITJEE Advanced, All India Rank 2870:** In top 1.5% amongst more than 2,00,000 students.
- **National Entrance Screening Test, All India Rank 8:** In top 0.016% amongst more than 80,000 students.
- **Kishore Vaigyanik Protsahan Yojana SA, All India Rank 298:** National Scholarship Examination held by Department of Science and Technology, Government of India.

Technical Skills

Programming Languages	C C++ Python
Libraries and Tools	OpenCV PyQt ROS Boost Numpy Tensorflow
Field of Interest	Path Planning Machine Learning Image Processing Algorithms

Activities & Leadership

- **Secretary, Code Club, IIT Kharagpur:** A society dedicated to garnering coding skills and shaping IIT Kharagpur's future in the coding arena. Organized up.AI 2018, West Bengal's largest Artificial Intelligence and Machine-Learning summit.
- **Active Member, Quiz Club, IIT Kharagpur:** Responsible for fostering participation and promoting quizzing in IIT Kharagpur.
- **Former Member, Technology Robotix Society, IIT Kharagpur:** Focal point for activities and projects related to robotics in IIT Kharagpur. Created a Lane Following Bot and organized Robotix 2018, one of India's largest robotics events.
- **Former Member, Debating Society, St. Columba's School**

Awards & Achievements

- **Qualified for ACM ICPC 2018 Asia Amritapuri Regionals:** Part of best ranked sophomore team from IIT Kharagpur.
- **Best Fresher, Poles Apart, Kshitij 2018:** Awarded 'Best Fresher' in a Robotics Event at Kshitij 2018.
- **Participated in Inter-IIT Cultural Meet, 2017:** Part of gold winning Quiz contingent.
- **Awarded a certificate of 'STUDENT PAR EXCELLENCE' by Computer Science and Engineering Department, IIT Kharagpur**