# Rajat Kumar Jenamani

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# Academics

2017-2021 Bachelor of Technology in Computer Science and Engineering, IIT Kharagpur **GPA** 9.91/10.0 (Currently Pursuing) 2017 Higher Secondary School Certificate Examination (CBSE), St. Columba's School GPA 97.4%

# Work Experience & Projects

#### Mar 18-Current

Arificial Intelligence Team Member: Kharagpur RoboSoccer Research Group Guide: Prof. Jayanta Mukhopadhyay

https://github.com/KRSSG

- Research Objective: To build and study cooperative multi-agent systems in dynamic adversarial environments.
- Regularly participates in RoboCup: An international scientific 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 STP architecture based codebase using PyQt and ROS: https://github.com/RKJenamani/robocup-stp/tree/GUI

#### Feb 18

RRT-Connect: An Efficient Approach to Single-Query Path Planning

https://github.com/RKJenamani/Rapidly-Exploring-Random-Trees

- Implemented a simple and efficient randomized algorithm for solving single-query path planning problems by incrementally building two rapidly-exploring random trees (RRTs) rooted at the start and the goal configurations.

#### June 18

Role Assignment: A Module for automatic allocation of tasks to bots in a dynamic soccer game enviornment. https://github.com/RKJenamani/Role-Assignment

- Implemented a methodology for multiagent/robot coordination that consists of a Game Analyzer module that dynamically creates tasks that need to be solved in Robosoccer game situations together with an Assignment Module that automatically assigns tasks to agents optimally.

## 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 | Boost | PyQt | MySQL | ROS | SolidWorks | HTML Field of Interest | Path Planning | Robotics | 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 2017, Asia's largest technomanagement fest.
- Participated in Inter-IIT Cultural Meet, 2017: Part of gold winning Quiz contingent.
- Gold in Freshers' Football Tournament, IIT Kharagpur, 2017

#### Relevant Coursework

(T)heory and (L)aboratory

Completed Programming And Data Structures (T/L) Algorithms I (T/L) | Discrete Structures (T) | Symbolic Logic (T) | Signals and Networks (T) **Currently Studying** Online Coursework Deep Learning Specialization (Coursera)