RAJAT KUMAR JENAMANI | 17CS10061

COMPUTER SCIENCE & ENGG. (B.Tech 4Y)

EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2021	B.TECH	IIT Kharagpur	9.68 / 10
2017	All India Senior School Certificate Examination	St. Columba's School	97.4%
2015	All India Secondary School Examination	St. Columba's School	10.0 / 10.0

INTERNSHIPS

Personal Robotics Lab, University of Washington **May 19 - Jul 19**

Guide: Prof. Siddhartha Srinivasa, CSE, University of Washington
•Implemented motion planning algorithms on coupled graphs of roadmaps sampled in the configuration space of a bimanual robot.
•Characterized its behaviors and deficiencies and developed algorithms (variants of Conflict Based Search) to address the same.
Research Areas: Graph Space Planning, Multi-Agent Pathfinding, Conflict Based Search

PROJECTS

Kharagpur RoboSoccer Students' Group, IIT Kharagpur **Mar 18 - Current**

Supervisor: Prof. Jayanta Mukhopadhyay, CSE, IIT Kharagpur
•Implemented motion planning algorithms and Finite State Machine (FSM) Architecture for RoboCup Small Size League.
•Designed a simulator for robots using PyQt.
Research Areas: Multi-Agent Systems, Motion Planning, Robot Soccer

JARVIC (Just A Rather Very Intelligent Chatbot) **Feb 19 - Current**

Guide: Prof. Debasis Samanta, CSE, IIT Kharagpur and Prof. Priyadarshi Patnaik, HSS, IIT Kharagpur
•JARVIC is an automated conversational agent that classifies the emotion of the user and forms replies based on his/her predicted emotional state.
•Used Seq2Seq and Bayesian Classifier for front end and an android application created using Android Studio and Java Socket Programming for back end.
Research Areas: Automated Cognitive Behavioral Therapy, Natural Language Proccessing

COMPETITION/CONFERENCE

International Collegiate Programming Contest (ICPC) 2019

Honorable Mention at ACM ICPC 2019 Asia Amritapuri Regionals. Best ranked sophomore team from IIT Kharagpur in nationwide prelims.

RoboCup 2019

Among top 25 teams across the world that qualified for SSL RoboCup 2019 , a six versus six robot soccer competition.

Inter-IIT Cultural Meet, 2017-2018

Part of Gold winning quiz contingent.

PUBLICATIONS

4th International Conference on Artificial Intelligence and Robotics, 2019

Title: Deep Learning rooted Potential Piloted RRT* for expeditious Path Planning
Authors: Snehal Reddy Koukuntla, Manjunath Bhat, Shamin Aggarwal, **Rajat Kumar Jenamani**, Prof. Jayanta Mukhopadhyay
•Proposed a deep learning based approach to predict the appropriate value of Potential Field function in the RRT*-APF algorithm.
Research Areas: Path Planning, Deep Learning

SKILLS AND EXPERTISE

Programming Languages: C++, C, Python, Java
Libraries and Tools: ROS, Boost, OpenCV, PyQt, Numpy, Tensorflow

COURSEWORK INFORMATION

Computer Architecture(T/L)*, Compilers(T/L)*, Machine Learning(T)*, Cryptography(T)*, Algorithms II(T)*, Probability and Statistics(T), Algorithms I(T/L), Software Engineering(T/L), Switching Circuits and Logic Design(T/L), Discrete Structures(T), Formal Language and AutomataTheory(T)
*:Ongoing, T: Theory, L: Laboratory

AWARDS AND ACHIEVEMENTS

Student Par Excellence, CSE IIT Kharagpur

Awarded certificate of **'Student Par Excellence'** by Computer Science and Engineering Department, IIT Kharagpur for exemplary academic performance.

All India Rank 298, KVPY SA 2016

All India Rank 756, IITJEE Mains 2017

All India Rank 2870, IITJEE Advanced 2017

POSITIONS OF RESPONSIBILITY

Organizer, Code-O-Soccer 2019 **Jan 2019**

Organized a national level Artificial Intelligence strategy coding event, held at Kshitij, 2019.

General Secretary, Code Club, IIT Kharagpur **Sep 2018 - Current**

Organized up.AI 2018, West Bengal's largest Artificial Intelligence and Machine-Learning summit.

Member, Technology Robotix Society **Aug 2017 - Apr 2019**

Built robots and organized Robotics Knowledge Sessions for students of IIT Kharagpur. Organized Robotix 2018, one of India's largest robotics events.

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