Vivek Mudgal

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EDUCATION

Indian Institute of Technology Kharagpur *July 2015 - July 2019(Expected)*
B.Tech in Electrical Engineering CGPA: 8.22 /10
Minor in Computer Science and Engineering

Gyan Ganga International School *March 2014*
All India Senior School Examination 90.6%
All India Secondary School Examination CGPA: 10/10

RESEARCH

IIT Kharagpur May 2017 - July 2017
Discrete-time Control Systems *Prof. in charge:Dr. Arun Ghosh*
· Designed and implemented a discrete time controller for a non linear magnetic leviation model on Simulink
· Observed the effect of the change in sampling time and compared the controller with continous time controllers
· Currently working on developing a 2-DOF controller and implementing it on real world system.

Aerial Robotics Kharagpur January 2015 - April 2015
Team Member, Control and Embedded Systems *Prof. in charge:Dr Somesh Kumar*
· Designed and fabricated a dual flip flop based emergency kill switch of a quadrotor for safety purpose
· Made the Simulink model of a quadrotor along with PID control to study its dynamics and control

POSITION OF RESPONSIBILITY

Technology Robotix Society, IIT Kharagpur February 2017-Present
Head
· I am responsible for designing an autonomous event to be held at Kshitij 2018, Asias largest techno- management fest. I help conduct technical workshops across India to spread the culture of robotics. Also I organize weekly lectures on manual and autonomous robotics for over 300 students round the year along with workshops and hackathons. I lead a three-tier team to successful planning and execution of all these events.

IEEE Robotics Winter Workshop December 2016
Autonomous Robotics Mentor
· I conducted a week-long workshop for 43 first and second year undergraduates at IIT Kharagpur. As a final project of the workshop I helped the students build a gesture controlled robot capable of removing small obstacles in its path. I taught about microcontrollers, and concepts like ADC, Timers, Interrupts, Communication Protocols and basic control theory.

Projects

Smart Steer Wheel Chair Attachment   April 2016
· Worked in a 20 membered team for Inter hall Hardware Modelling to make an autonomous Wheelchair
· Contributed in interfacing sensors including SONARs, GPS; writing obstacle avoidance algorithms on ROS and designing Eagle CAD circuits

Achievements

International Aerial Robotics Competition   August 2017
· Represented IIT Kharagpur in the "2017 Dream Angel Cup" held in Beijing. Won an award for the Most Innovative Design in Asia/Pacific Venue

Inter Hall Hardware Modelling   February 2016
· Part of a Gold winning team which designed a attachment to increase the utility of an ordinary wheelchair

JEE Advanced   June 2015
· Secured an All India Rank of 975 in JEE Advanced, 2015 among those who qualified with a percentile of 99.5

Coursework

IIT Kharagpur

Completed	**Ongoing**
Electrical Machines	Control Systems Engineering
Analog Electronics	Linear Algebra
Signals & Networks	Digital Electronics
Introduction to Elctronics	Power Electronics
Transform Calculus	
Programming & Data Structures	

Additional Courses

Completed	**Ongoing**
Control of Mobile Robots(Coursera)	Machine Learning (Coursera)

Skills

Computer Languages
C/C++ (Proficient), Python, MATLAB

Software & Tools
ROS, Gazebo, Arduino, AVR, Git, Linux, LaTeX, Eagle CAD, LabView, PSpice, Simulink

September 20, 2017