Abhishek Rai

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Objective

To work on projects that involve using concepts of design, machining and testing in order to enhance a process of a system. In search of position at an innovative firm.

Education

Year	Degree/Certificate	Institute	CGPA / Percentage
2012	Secondary School Certificate	Swami Vivekanand High School	86.73%
2014	Higher Secondary School Certificate	R.J Junior College	84.46%
2014	1st Semester Btech Mech	K.J. Somaiya College of Engineering	8.69
2015	2nd Semester Btech Mech	K.J. Somaiya College of Engineering	8.19
2015	3rd Semester Btech Mech	K.J. Somaiya College of Engineering	7.57
2016	4th Semester Btech Mech	K.J. Somaiya College of Engineering	7.98
2016	5th Semester Btech Mech	K.J. Somaiya College of Engineering	7.82
2017	6th Semester Btech Mech	K.J. Somaiya College of Engineering	7.28
2017	7th Semester Btech Mech	K.J. Somaiya College of Engineering	8.08

Projects

Autonomous Water Rover (July 2017 - Present):
An autonomous water surface vehicle aimed for still water body monitoring and surveillance, along with applications like depth mapping, fish finding.

Robo-Rehab (December 2017 - Present):
An automated continuous passive motion device for the arm to aid physiotherapists in rehabilitation of paralysis/stroke victims and compile statistical report to track the growth of muscle strength.

Pole climbing robot (December 2017 - March 2018):
Pneumatic based pole climbing robot capable of translating linearly.

4-axis robotic arm (2016):
A 4-axis articulated robot controlled using forward kinematics.

Robocon (November 2015 - March 2016)
Designed and fabricated eco and hybrid robot to perform the tasks specified by ROBOCON theme.

Robocon (November 2016 - March 2017)
Designed and fabricated a frisbee launching robot.

Experience: KJSCE ROBOCON (OFFICIAL ROBOTIC TEAM OF KJSCE)

Technical Head (May 2016 - April 2017)

- Developed prototype components, assemblies and tooling
- Managed design and manufacturing team to build proprietary process equipment within cost and time constraints
- Created CAD models and drawing with motion and flow simulations
- Worked with various actuators including motors, pneumatics, linear actuators
- Successfully designed and fabricated hybrid robot, wind powered eco robot and automated frisbee throwing robot

Technical Skills

1. Software Platforms Used:
    - Computer Aided Design (CAD): Soildworks(2017), Autodesk Inventor(2014)
    - FEA and simulation tools: Ansys(2016), Solidworks(2017),MATLAB(2016a)
    - Programming languages: C, C++, Python
    - Others: HTML, MySQL, Visual Studio
2. Hardware Machines :
    - Manufacturing: Lathe, CNC Lathe, Shaping machine
    - Prototyping: 3D printer, Laser cutter

Soft Skills

- Self Motivated
- Handles deatils
- Keeps control over budget
- Defines needs
- Provides well-thought out solution