KAILASH NAGARAJAN

Plot No. 26 Opposite to G.K. Apartments,Hyderabad-500062.
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OBJECTIVE

A senior year mechanical engineering student with excellent problem-solving skills seeking hands-on experience with an organisation that embraces creativity and innovation. During my undergraduate studies, I have gained an extensive knowledge of Machine Learning, Robotics, Data-driven techniques, Systems and Control in addition to the regular coursework for a mechanical engineering degree. I identify as an effective communicator who builds positive cohesive relationships with my colleagues.

EDUCATION

Bachelor of Engineering in Mechanical Engineering June 2015 - June 2019
Amrita School of Engineering, Amritapuri
Amrita University, CGPA: 7.96/10.00

CBSE, Class XII June 2014 - May 2015
Delhi Public School,Hyderabad,Telangana, 81%

ICSE, Class X March 2012 - March 2013
Johnson Grammar School, Hyderabad, Telangana, 82.1%

SKILLS AND INTERESTS

Skills	System and Control Design, UAV's, Data-Driven Control Design, Computer Vision, Machine Learning, Rapid Prototyping(3D-Printing,Laser-Cutting,CNC Router)
Interests	Mathematical Modeling, Data-Driven Techniques, Machine Learning for Control Applications
Softwares	Autocad, SolidWorks, Tensorflow, Caffe, InkScape, ArtCAM, OpenCV, Arduino, RD Works, Matlab, ANSYS
Programming	C, C++, Java, Python for ML, HTML

PROJECTS

Control Systems Engineer
Accelo Innovation Private Limited Dec 2017 - July 2018
Intern

- Developed an environment for automatic cruise control of a car using real footages.
- Hands on experience with Computer Vision, Machine Learning using C++, Python and Matlab.
- Developed an Object detector using Tensorflow API and Caffe-Python.
- Hands on Experience with Computer Vision using MATLAB,OpenCV using both Python and C++.

Maker
Reasearch Innovation and Design Laboratories June 2017 - July 2017
Intern

- Design and Rapid prototyping using multiple machines.
- Fabrication, Control and Optimization of a Quad-copter.
- Design,Fabrication of a Chair and Table on a CNC Router.
- Assisted for two MIT FAB academy projects in 3D Design,Electronics,Rapid Prototyping.
- Mentored a group of students with basic robotics.
- Familiarization of Laser cutting Acrylic,Cardboard,Leather etc.
- Familiarized with Molding Glass Fiber Sheets using Composites and Vacuum packing.

Co-Founder
Robotics Club March 2016 - July 2018
Member

- Design, Fabrication,Optimization and control of the Self Balancing robot
- Design and Fabrication of an RC Hovercraft
- Tried out different Regression Algorithms for a given set of data.
- Online course on Introduction to Data Analytics and Machine learning.(nptel/iitm)
- Design, Fabrication and optimization of a Quadcopter

Intern
Ammachi Labs 29th March 2016-1st August 2016
Project

- Worked as a Control engineer on a fully automated Wheelchair to bed transformation system.
- Hands on Experience with Mechanical Design using Solidworks.
- Familiarized with Mechanisms and its Kinematics

Project Head
Mechatronics and Intelligence Systems Research Jan 2017- August 2017
Project

- Analyzed and Implemented Inverse Kinematics on a Humanoid.
- 3D designing and Rapid prototyping with a 3D printer.
- Design and Fabrication of a prosthetic ARM using servo control using PWM signals.

Student Researcher
Center for Computational Engineering and Networking Sept 2018-Present
Major Project

- Implemented Linear Algebra based problem solving techniques for image compression,search techniques etc.
- Research on Data Driven Control Techniques(Dynamic Mode Decomposition and Machine Learning)
- Control and State Estimation of Parrot Rolling Spider Drone using MATLAB

ACHIEVEMENTS

Invited to Speak at MIT FAB14 Conference at Paris,France.

Selected as a Control systems Engineer by HyperLoop India

Participated in CBSE Regional Science Fair 2014. With a Project on Regenerating Brake.

1st in Indian Robotics Olympiad Regional, 3rd in Indian Robotics Olympiad National.

3rd in National Level Robotics Competition in IIT Delhi

REFRENCES

Gaurang Shetty- CEO, Riidl (Research Innovation Incubation Design Labs),gaurang@somaiya.edu-7738082996

Meher Madhu Dharamana- Asst.Professor Amrita University,mehermadhud@am.amrita.edu-7025867660

Arbaz Reza- CEO, Accelo Innovation Pvt Ltd, arbaz@accelo.io-7045945629