



Vishnu Prem

Mechatronics Engineer

A highly focused and energetic young professional with quick grasping ability, a knack for problem solving and a passion for technology

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EDUCATION

BTech Mechatronics with minor in Robotics and Automation

Manipal Academy of Higher Education

2014 – 2018

Dubai, UAE

WORK EXPERIENCE

Robotics and Animatronics Intern Mimic Productions

03/2019 – Present

Berlin, Germany

- Tasked with microcontroller programming to operate numerous motors to control a realistic animatronic human head capable of expressing emotion realistically

Intern (Digital Media & IT department) Pico International LLC

10/2018 – 01/2019

Dubai, UAE

- Implementation and on-site technical support for Sliding touch screen based application
- On-site operation of bipedal robots for crowd engagement
- Mobile app testing
- Research on latest technological trends

Undergraduate Student Researcher

Autonomous Systems and Advanced Robotics Research Center, University of Salford

02/2018 – 06/2018

Manchester, UK

- Research on mobile robot navigation and localisation techniques
- Implementation of deep learning based visual object recognition model
- Gathered training data and retrained model to identify new objects
- Developed and implemented algorithm for robot localisation using RGBD sensor
- Designed and tested obstacle avoidance algorithm based on sonar data

TECHNICAL SKILLS

Python

C++

Java

C#

CAD

Labview

MatLab

ROS

HTML

MS Excel

TECHNICAL PROJECTS

Mobile Robot Localisation using Landmark based Triangulation (02/2018 – 05/2018) [↗](#)

- Implementation of object localisation using object detector model and RGBD sensor
- Development of algorithm for robot localisation using position of visual landmarks
- Realized obstacle avoidance capability using sonar sensor data

Chess Playing Robot (11/2016 – 02/2017) [↗](#)

- Developed image processing algorithm for detecting move made by human
- CAD design and 3D printing of gripper and scotch yoke mechanism to pick and place chess pieces
- Integration of electromechanical components for control of robot arm

Gait development for Bipedal agent (07/2017 – 08/2017) [↗](#)

- Design and development of control system for locomotion of two legged agent
- Optimization of neural network controller done using genetic algorithm
- Evaluation of performance carried out in simulation

Motion Tracking Camera (08/2016) [↗](#)

- Development and implementation of algorithm to detect motion in dynamic images
- Implemented closed loop control of motor to turn camera towards detected motion

TEACHING/MENTORING EXPERIENCES

Math and Coding Instructor (02/2019)

Worked for Coded Minds Academy who conducted a 2 week program at Sheikh Khalifa bin Zayed Arab Pakistani School

1st Place in IOP 'YOUNG LECTURER' Competition for university level (03/2018)

Competition hosted by Institute of Physics at Manchester Metropolitan University, UK

Volunteer Mechatronics Department Head for Technovanza '17 (02/2017 – 04/2017)

Volunteered for annual technical festival head at MAHE Dubai