Kaustav Ghosh

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Manipal Institute of Technology
B. Tech in Computer Science & Engineering 2018 – 2022

INTERNSHIPS

- **Microsoft Student Partners-Machine Learning Internship**
  -Guided a team of 10 individuals to collaborate and accomplish a Regression task of price prediction of used cars in machine learning pipeline through Exploratory Data Analysis,Feature Engineering and Model Building.
- **Qbotics Labs - Robot Operating System Internship**
  - Constructed a Differential Drive with caster wheel from scratch using URDF and XACRO files and mounted the same with laser scanner , IMU and Velodyne Puck VLP-16 Lidar and simulated the same in Gazebo and Webots
- **United Nations TakenMind-Global Data Analytics Internship**
  - Scripted a personal version of Numpy and Pandas Documentation
  - Performed Exploratory Data Analyis techniques using Matplotlib and Seaborn
  - Created several boxplots,countplots,heatmaps of several datasets
- **Ineuron Deep Learning with Computer Vision and Natural Language Processing Internship**
  - Currently learning CNNs and RNNs

ACADEMIC PROJECTS

- **Finland Labs in association with NSS IIT Roorkee - Covid 19 Data Analysis, Time Series Forecasting and Web Scraping**
  - Prepared a complete Data Analyis report on the World-wide COVID-19 attack statistics and used the Facebook's fbprophet Time-series Forecasting library to speculate the number of active corona victim cases in the upcoming days.
- **Data Exchange in Heterogeneous Systems**
  - Learnt basic Fortran to script a Sine Series expansion, to import theta values & export Sine theta values.
  - Used Java to import the same theta values & export Cosine theta and store the same in MySQL database.
  - Used Python to import the Sine and Cosine thetas values to prove $\sin^2\theta + \cos^2\theta = 1$
- **Food Labs Robotics Startup Interview - ROS Engineer Role**
  - Designed, modelled, constructed and Assembled a plethora of sensors and Robots across multiple software platforms like freeCad, Blender, Gazebo and also fabricated a Defense Building from scratch using floorplan and Gazebo World Editor
- **Analysis of Selective Compliance Assembly Robot Arm and Modelling of T3R Robot**
  - Computed DH parameters for the SCARA robot and used it to formulate the Forward and Inverse Kinematics of the robot arm. Also formulated Lagrange Euler Dynamics

POSITIONS OF RESPOSIBILITY

Local Committee Member of IOSD(International Organization of Software Developers)

COURSES TAKEN

Coding Ninjas- Completed C++ & Data Structures.Currently doing Algorithms & Competitve Programming Course.
NPTEL-Basic Electronics,Switching Circuits & Logic Design,Computer Organization & Architecture,OOP with Java

TECHNICAL SECTION

Softwares Used: Anaconda,AutoCAD,Matlab,Keil,Altera MaxPlus 2,VirtualBox,Vm Ware,Oracle SQL,VS Code & Sublime Text
Programming Languages: Fluent in C/C++,Familiar with Java & Python,Verilog,LaTeX,Linux Shell Scripting, fair acquaintance with ARM assembly programming*(NXP LPC 1768)*
Libraries & Frameworks: C++-STL **Java**-JavaFX GUI **Python**-Numpy, Pandas, SciPy,Scikit-Learn,Matplotlib, Keras, Tensorflow
Web-Dev Languages,Libraries & Frameworks: Familirity with HTML, CSS, JavaScript & fair acquaintance with MERN stack
Operating Systems Used: Windows-XP,Vista,7,10 **Linux**-Ubuntu