RISHABH DEEP SINGH | 16ME10049

MECHANICAL ENGG.(B.Tech 4Y)

EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2020	B.TECH	IIT Kharagpur	6.31 / 10
2016	Punjab School Education Board	Guru Ram DAS Academy Sr. Sec. School	100%
2014	Central Board of Secondary Education	Jiya Lal Mittal DAV Public School	9.4 / 10

INTERNSHIPS

Software Developer Intern | Intugine Technologies   May, 2019 - July, 2019
- I built an Algorithm for resolving the wrong Jump/Ping points and deploying it on the main website using NodeJS.
- Automated **Billing** and Late trips report, which is circulated by email monthly and daily basis using **AWS** lambdas.
- Built a parser/utils for the Database using python and deploy it to the **Python Package Index(PyPI)** Repository.
- Collected data from **Open Street Map** for different locations of India and used as a training set for ETA Prediction.
- Worked on modules for Trips, Battery Percentage, Halts for new Operations dashboard programmed in Python.

Student Developer | Google Summer of Code (Openroberta Lab)   May, 2018 - August, 2018
- Integrate the server and a Web-View using **Chromium Embedded Framework(CEF)** running it entirely locally.
- Customized Important features of the Web-UI that were not required in the **Standalone** version of the software.
- Combining the **Blockly** elements with the **Parts of USB** program to allow it to work with the local Robots.
- Finally bundling the app as an Android app which helps in transferring the code directly to the robot using mobile.

PROJECTS

Design and Development of Graph related Algorithms   July, 2019 - Present
Mentor: Pawan Kumar, Department of Mathematics, IIT Kharagpur
- Website main focus is on incorporating Different Graph related algorithms and then displaying it on the web site.
- The main web application was developed using HTML, CSS, React JS while NodeJS was used in backend for server.
- Design and developed of the Depth First Search / Breadth First Search / **Dijkstra** / A Star / **Hybrid A Star** / **BiDirectional BFS** search algorithms for Graphs and display shortest path on the webpage using matrix.
- Deployed **Euclidean, Manhatten, Octile, Chebyshev** heuristic for finding the path from source to destination.

Student Mentor | Kharagpur Winter of Code   December, 2018
- Peer **Mentor** for 5 students and help them navigate through the codebase and assigning them tasks for the App.
- Fetched data from students **ERP** and showing timetable, Free slots, Professors all details on the android app.
- Properly structured the code for the TicTacToe by creating different directories for assets, resources, and code.
- Added support to Landscape mode and removed Splash screen for Voice Calculator app using XML and Kotlin.

SKILLS AND EXPERTISE

Programming Languages: C++, Java, Python, NodeJS, Android, Maven, Bash, HTML, CSS, Latex
Database and Server: MongoDB, SQL
Frameworks Libraries: Chromium Embedded Framework, Electron, React JS
Software Packages: Intellij Idea, Android Studio, PyCharm, Visual Studio Code, Unity Engine, MS Office

AWARDS AND ACHIEVEMENTS

Scholastic Achievement
- Secured **1st** rank among **3.40 lakhs** students in senior secondary in Punjab School Education Board, 2016-17

Sports Achievements
- **Silver** Medal in Weightlifting under 77Kg in Interhall Competition IIT Kharagpur | March 2019
- **Bronze** Medal in Weightlifting under 77Kg in Annual sports fest Sangram at IIT Roorkee | Match - April 2018

COURSEWORK INFORMATION

Programming and Data Structure | Programming and Data Structure Lab | Algorithm and Analysis | Soft Computing | Operating System | Mechanics | Dynamics | Kinematics of Machines | Mechanics of Solids* | Dynamics of Machines | Machine Tools and Machining* | Machine Design Practice

EXTRA CURRICULAR ACTIVITIES

- Participated in a two days **Disaster Management** program held at IIT Kharagpur, March-2018
- Organized **Lohri Celebrations** festival among the students of IIT Kharagpur which saw a footfall of **350** students.
- An active member of the National Sports Organization (NSO), IIT Kharagpur from July 2016 - April 2018
- Part of **Silver** Winning Illumination and Rangoli team of Azad Hall of Residence, IIT Kharagpur, 2018
- **Bronze** Medal in Open IIT Powerlifting under 77Kg category lifting a total of **390 Kg**, 2018

!self declaration by the student