PANKAJ SETHI | 18ME10035

MECHANICAL ENGG.(B.Tech 4Y)
MINOR in COMPUTER SCIENCE & ENGG. (B.Tech 4Y)
MICRO SPL. in ARTIFICIAL INTELLIGENCE AND APPLICATIONS

EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2022	B.TECH	IIT Kharagpur	8.50 / 10
2018	CBSE XII	Kendriya Vidyalaya No.1 BBSR	87.2%
2016	CBSE X	Kendriya Vidyalaya No.1 BBSR	10 / 10

SKILLS AND EXPERTISE

Programming Language: Python, C++, C, JavaScript, SQL ,MATLAB
Libraries: Pandas, Numpy, Matplotlib, Scikit, Tenserflow, Keras, nltk, OpenCV, Seaborn, Sci-py, React
Technical Software: Anaconda distribution, Microsoft Visual Studio, Spyder, Jupyter notebook, GitHub, MySQL, MATLAB(and Simulink), Simscape, ANSYS, Solidworks, Pointwise, Slack, Excel.

CERTIFICATIONS

Python for Everybody Specialization | Coursera

- Learned from basics to Advanced Python Programing; used it to perform various jobs like data mining and vizualization.
- Executed various data mining program using **API**; interacted with Twitter API and google maps API using Python.
- Extracted **JSON** and **XML** scripts form online sites and **parsed** them to make them readable by python.
- Performed Relational Database Management using **SOLite** with python client to save the data which was retrieved online.

COURSEWORK INFORMATION

Curricular Courses
AI: Foundation and Application | Natural Language Processing | Algorithms Lab | Programming &Data Structures | Probability &Statistics | Basic Electronics | Multi-variable Calculus | Transform Calculus | Fluid Mechanics | Engineering Drawing and Computer Graphics

MOOCs
Coursera - Neural Networks and Deep Learning by Andrew Ng | Udemy - Machine Learning A Z^{TM} | Hands-On Python &R In Data Science | Coursera - Python for Everybody Specialization | Coursera-Introduction to Self-Driving Cars | edX - Hands-on Introduction to Engineering Simulation

PROJECTS

TeamKART | Official FSAE team of IIT Kharagpur — Sep 2019 - Present

- Involved in the research and development of a complete aerodynamics package in accordance with the rule-book constraints.
- Trained in **CFD** simulation software like ANSYS **fluent** and **Simscale**; conducted industrial level analysis and evaluation of design
- Optimized C_L-C_D values for Airfoils of the rear and front wings using results obtained from iterative simulations.
- Researched on **Composites** materials for manufacturing of bodyworks of the car; engaged in collecting quotation for the same.
- Coordinated with the team in formulating the timeline and budget for the succeeding car.

Data-Extraction & Visualization of IMDB Top Chart | Self-project

- Retrieved Data of rated top 250 movies list from IMDB website using python library **requests**; parsed the script using **BeautifulSoup**.
- Organized the retrieved data into SQL database using python library **sqlite3**; set-up various many-to-many relations through **SQLite**.
- Analyzed the relation and co-relation between the different attributes of the list of movies and provided with **vizualization** of these result.

Design and development of a smart environment | FTP — Jul 2021 - Sep 2021

- Worked as a **summer research intern** under Prof. Giuseppe Desolda; an assistant professor at the *University of Bari Aldo Moro, Italy.*
- Got hands-on experience with IoT tools and simulate a model via software tools like TinkerCad and Node-RED, etc.
- Implemented a Web Application integrated with a ground-level IoT system model to develop a smart-parking system.

POSITIONS OF RESPONSIBILITY

Aerodynamics Team Head | TeamKART IIT Kharagpur — Jul 2020 - Present

- Responsible for the manufacturing & installation of a complete aerodynamic package for the **first time** in TeamKART in the upcoming car.
- Contributed to formulating the timeline of manufacturing of **K6**; discussed & presented the estimated budget for aerodynamics package.
- Managed particularly **5** aerodynamic subsystem members; provide them with practical knowledge; distributed tasks among them; guided and supervised them through their progress in the team.

Aerodynamics Team Member | TeamKART IIT Kharagpur — Sep 2019 - Jul 2020

- Responsible for design, analysis and testing of the aerodynamic package that is to be installed in the upcoming car.
- Lead the manufacturing part of the subsystem and composed the plan of action to be used fabrication of aerodynamic **composite** parts.
- Responsible for training basic automobile aerodynamics and manufacturing concepts to around **30** first-year undergraduate students.

Associate Member of InstituteWellness Group (IWG) — Jan 2019 - Jul 2020

- Served as an Associate Member of InstituteWellness Group, under the Technology Students' Gymkhana, IIT Kharagpur.
- Being a member of the welfare-group we as a team had determined to address and resolve problems faced by the student community.
- Successfully conducted various well-fare and community-building events for the student community of IIT KGP; Novel Exchange, Gratitude Drive, DJ night, Fresher's-welcome, Bench buddies and inter-department General Championship being one of these events.

EXTRA CURRICULAR ACTIVITIES

- Attended Winter-Workshop for Image Processing, in 1st.year summer vacation. Learned the basic theory behind Computer Vision
- Took Part in General Championship Tech. Hardware-Modeling in 1st Year; Build body works of semi-autonomous robotic fire-extinguisher.
- Participated and bagged 3rd place in institute at Johnson & Johnson - Business Case Competition.

!self declaration by the student