



Saransh Gupta

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EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2022	M.TECH Dual Degree 5Y	Indian Institute of Technology, Kharagpur	7.51/10
2016	Senior Secondary Examination	Shiv Jyoti sr. sec. public school, Kota	85.4%
2014	Secondary Examination	Shri Maheshwari sr. sec. public school, Jodhpur	89.5%

Research Experience

Research Assistant (Remote)	Mizuguchi Lab, NIBIOHN, Osaka, Japan	Jan 2020 - Sep 2020
<ul style="list-style-type: none">Contributed to writing a research paper on the prediction of the Non-small cell lung cancer (NSCLC) and identify its potential drug targetsImplemented Boruta Feature selection and extracted 412 highly contributing genes out of 10077 which play a key role behind this cancerApplied CatBoost classifier on the 412 genes to predict the cancer with an accuracy of 99% upon validation and 100% on the test datasetSingle-handedly simulated a Bayesian Network Model for the "Rho GDI signaling pathway" to detect aberrations & identify the drug targetsThis research will lead to an early diagnosis, accurate treatment of the disease directly impacting the 85% of the total lung cancer patientsTools and Software: Python, Boruta, TargetMine, CatBoost, scikit-learn, SMOTE, networkx, pgmpy, numpy, pandas, plotly, joblib		

Internship Experience

Data Analyst Intern	Sapio Analytics PVT LTD	May 2020 - July 2020
<ul style="list-style-type: none">Worked with the team to build a web based Decision Support System for the prediction of COVID-19 at the hyperlocal levelLed to the Innovation of a Migration-Lockdown based SEIRD model, reduced the error in predictions up to 4.8% by optimizing its parametersThe application is currently being used by The Govt. Of Telangana to mitigate COVID-19 spread while maximizing their economic activitiesTools and Software: Python, scipy, numpy, pandas, matplotlib, jupyter notebook, AWS, sqlalchemy		

Deep Learning & Computer Vision Intern	Swaayatt Robots PVT LTD	April 2020 - June 2020
<ul style="list-style-type: none">Worked towards automating the feature extraction and bounding box tracking in different conditions of Day light and road semanticsProgrammed SuperPoint algorithm, a deep learning approach to extract the features of an image for Point tracking and Visual OdometryTrained & tested the Linear Style Transfer algorithm to change the semantics of the road and convert frames between day and nightTools and Software: Python, pandas, numpy, tensorflow, pytorch, OpenCv, matplotlib, Jupyter Notebook		

Self-Projects

Detection of Malaria with Deep Learning	Kaggle	(GitHub link)
<ul style="list-style-type: none">Trained a Convolutional Neural Network on blood smears images to detect the Malaria Parasite, obtained accuracy of 96% upon validationUsed Image processing to blur, rotate, resize the image to increase the data-set content and improve the robustness of the modelTools and Software: Python, pandas, numpy, tensorflow, OpenCv, matplotlib, Jupyter Notebook		

AWARDS AND ACHIEVEMENTS

<ul style="list-style-type: none">Awarded as Intern of The Month for my contribution as a Data Analyst to the COVID-19 project at Sapio Analytics by the CEO of the companyGot featured in the ISE Newsletter Autumn-2020 under the Department Spotlight of ISE fights COVID-19 for internship at Sapio AnalyticsSelected for a scholarship of 2200 euros by The Aix-Marseille University, France for the summer internship **Secured Top 5% position among the total applicants of the summer internship program at The Institute of Science & Technology Austria		
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SKILLS & EXPERTISE

<ul style="list-style-type: none">Programming & Applications: Python, C++, R, C, Image Processing, Computer Vision, Machine Learning, Deep LearningSoftware: Tableau, MATLAB, ANSYS, Solid works, Unity3D, R-Studio, MATLAB, SOLIDWORKS, Visual Studio, MS-EXCEL

Competitions/Conferences

International Conference on Human Interaction & Emerging Technologies: Future Applications	27-29 August, 2020
<ul style="list-style-type: none">Virtually Presented the research paper on "Development of a virtual reality based fire training simulator and machine learning based path guidance system: A case of hospital fire breakouts" at Centre Hospitalier Universitaire Vaudois, Lausanne, Switzerland	
Inter-Hall Data-Analytics competition	Azad-Hall, IIT Kharagpur
<ul style="list-style-type: none">Awarded with BRONZE for the Inter-Hall Data-Analytics General Championship organized by The Technology Students Gymkhana	
Data-Analytics and business case study event	Shaastra-the annual Tech Fair, IIT Madras
<ul style="list-style-type: none">Stood 2nd at the data analytics event DataBuzz, Shaastra, the annual Tech and Innovation fair at IIT Madras	

POSITIONS OF RESPONSIBILITY

IIT KGP Student Mentorship Program	Student Welfare Group, IIT Kharagpur	From July 2019
<ul style="list-style-type: none">Mentoring four undergraduate students of the same branch under the shade of Student Welfare Group, IIT KharagpurResponsible for regular counselling of the undergraduate students assigned by the Student Welfare Group, IIT Kharagpur		

CERTIFICATIONS & COURSES

Department Courses: Probability and Statistics, Operations Research-I, Programming and Data Structures, Optimization and Heuristic Methods
MOOC Courses: Machine Learning, Data Analytics, Algorithms in programming, Deep Learning, 3D Simulations and Virtual Reality

EXTRA CURRICULAR ACTIVITIES

<ul style="list-style-type: none">Swimmer at water-polo team of Azad-hall of residence, Inter-hall general championship events, TSG - IIT KharagpurPresentation team member of Inter-Hall Gardening competition team at Azad-hall of residence, TSG - IIT KharagpurManager at KHOJ, the annual treasure hunt event conducted by The Azad hall of residence and TSG, IIT Kharagpur	March 2018 March 2019 August 2018
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** (cancelled due to COVID-19)