



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	XII(RBSE)	Rajasthan Board	85.4%

Research Experience

Research Assistant Mizuguchi Lab NIBIOHN, Osaka, Japan Guided by Dr. Kenji Mizuguchi	Jan 2020 - present
<ul style="list-style-type: none">Worked on a high-dimensional data containing 10077 genes with their expression values to predict the Non-small cell lung cancer (NSCLC)Applied machine Learning for the predictions along with estimating the crucial genes whose content affects this type of lung cancerApplied CUDA enabled CATBOOST classifier to predict the cancer with an accuracy 99% on validation & 100% test datasetImplemented Boruta Feature selection technique to sample out 412 crucial genes out of all which are mainly responsible for this cancerSingle-handedly programmed a Bayesian Network Simulation on "Rho GDI signaling pathway" for identifying potential 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 softwares: Python, Boruta, WGCNA, R, TargetMine, Reactome, scikit-learn, SMOTE, Bayesian Belief Networks, Graph Theory	

Internship Experience

Lead Data Analyst COVID-19 Indian National Supermodel (INS) Sapio Analytics, India	May - July 2020
<ul style="list-style-type: none">Led the team of 15 to build an AI driven DSS for the prediction of COVID-19 at the hyperlocal level based on the lockdown and migrationSingle-handedly built a Migration-Lockdown based Machine Learning driven SEIRD model, reduced the error in predictions up to 4.8%Directly Impacting the lives of 35 million people of The State of Telangana by helping their Government taking decisions on lockdown	

Deep Learning & Computer Vision Software Development Intern Swaayatt Robots, India	April - June 2020
<ul style="list-style-type: none">Worked with a team of Computer-Vision enthusiasts and contributed towards automating the feature extraction and bounding box tracking for the simulation of autonomous cars using CARLA Simulator in different conditions of Day light, weather and road semanticsProgrammed SuperPoint algorithm, a deep learning approach to extract the features of an image for Point tracking & Visual OdometryTrained & tested the Linear Style Transfer algorithm to change the semantics of the road & convert day-night in images	

Self-Projects

Detection of Malaria using blood smears images with Deep Learning Kaggle	(GitHub link)
<ul style="list-style-type: none">Trained a Deep Learning model using CNN on Malarial and Non-Malarial Pathological Slides to predict the Disease with an accuracy of 96%.Used Image processing to blur, rotate, resize the image to increase the data-set content and improve the robustness of the modelTools and Softwares: Python, pandas, numPy, tensorflow, Convolutional Neural Networks, Opencv, Image Processing.	

AWARDS AND ACHIEVEMENTS

Intern of The Month	Sapio Analytics PVT. LTD.	July 2020
<ul style="list-style-type: none">Awarded for my impeccable contribution by Mr. Ashwin Srivastava, the CEO of the Sapio Analytics and Forbes 30 Under 30 Asia 2017Received The Letter of Appreciation along with the pre-internship offer from Mr. Hardik Somani, COO, Sapio Analytics PVT LTD		
The A*Midex foundation scholarship from Aix-Marseille University Marseille, France		May-July 2020
<ul style="list-style-type: none">Selected for The A*Midex foundation scholarship from Aix-Marseille University worth around 2200 euros for the summer internship		
Top 5% of the applicants for ISternship, the summer internship program at The Institute of Science & Technology Austria, summers 2020		

SKILLS & EXPERTISE

<ul style="list-style-type: none">Programming & applications: Python, C++, R, C, Arduino, Image Processing, Video Analytics, Machine Learning, Deep Learning.Tools and Softwares: Tableau, MATLAB, ANSYS, Solid works, Unity3D, R-Studio, MATLAB, SOLIDWORKS, Visual Studio, MS-EXCEL	
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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	
The Annual Inter-Hall Data-Analytics competition Azad-Hall Technology Students Gymkhana IIT Kharagpur	10 Feb, 2019
<ul style="list-style-type: none">Awarded with BRONZE for the Inter-Hall Data-Analytics General Championship organized by The Technology Students Gymkhana	
DataBuzz Data-Analytics and business case study event Shaastra-the annual Tech Fair IIT Madras	6 Jan, 2020
<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 Technology Students Gymkhana 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 Kharagpur

CERTIFICATIONS & COURSES

<ul style="list-style-type: none">Department Courses: Probability Statistics, Operations and Research, Programming and Data Structures, Optimization Heuristic MethodsMooc Courses: Machine Learning, Data Analytics, Algorithms in programming, Deep Learning, 3D Simulations and Virtual Reality	
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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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