



Saransh Gupta

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EDUCATION

| Year | Degree/Exam | Institute | CGPA/Marks |
|------|------------------------------|---|------------|
| 2022 | M.TECH Dual Degree 5Y | Indian Institute of Technology, Kharagpur | 7.84/10 |
| 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

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|---|---|----------------------------|
| 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

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| 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 | | |

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|---|--------------------------------|-------------------------------|
| 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

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| 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

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| <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

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| <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 |
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Competitions/Conferences

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| 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

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| 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

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| 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

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| <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)