



SUJAY RASTOGI

Course : **M.Sc. (Hons.)**, Mathematics and **B.E. (Hons.)**, Computer Science, 2024

Email : F20190741@PILANI.BITS-PILANI.AC.IN

Mobile : 9044002979

CGPA : 8.30



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COURSE	SPECIALIZATION	INSTITUTE/COLLEGE	BOARD/UNIVERSITY	SCORE	YEAR
CLASS XII	SCIENCE	City Montessori School, Gomti Nagar - I, Lucknow	ISC	96.25 %	2019
CLASS X		St. Francis' College, Lucknow	ICSE	94.8 %	2017
Subjects / Electives	Graphs & Networks, Data Structures & Algorithms, Object-Oriented Programming, Database Systems, Operating Systems, Computer Networks, Machine Learning, Probability & Statistics				
Technical Proficiency	Java, Python, C Programming, NetworkX, Tkinter, NumPy, Pandas, Matplotlib, Seaborn, Scikit-Learn, OpenCV, statsmodels				

SUMMER INTERNSHIP / WORK EXPERIENCE

Software Development Intern, Amazon 'MyHR LiveHelp Feature Enhancements'	May 2023 - Jul 2023 [React, TypeScript, Java]
• Developed the read-receipt feature in the LiveChat of MyHR , which is a tool for Amazon employees to contact HR support for their needs. • Provided support to 22 languages , deployed the feature end-to-end , and enabled the receipts for the agent portal . • Standardized the post-chat survey form across the 7 business lines and correctly tagged the form with the associated business line. • Updated a current API to send popstar flags and consumed them in the UI for feature control , allowing a new feature to be released in waves .	
Summer Intern, Indian Institute of Management (IIM) Lucknow 'Stock Market predictions using ARIMA models'	Jun 2021 - Jul 2021 [Pandas, NumPy, Seaborn, and statsmodels]
• Worked with Dr. Alok Dixit (Assoc. Prof, Dept. of Finance & Accounting), on time series modeling and forecasting of the NIFTY 50 TRI data. • Performed data cleaning, exploratory data analysis, and applied and compared time series models like AR, MA, ARIMA, SARIMA, and ARCH.	
Summer Intern, Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam 'Development of Computer Vision tools for Feature Recognition in Microscopic Images'	May 2021 - Jul 2021 [Matplotlib, Scikit-Learn, Scikit-Image, and OpenCV]
• Developed ML pipeline for data-driven classification tasks and automated labeling and analysis of microstructural images. • Leveraged Image Processing & Computer Vision techniques for feature identification and measurement to obtain a 77% matching score .	

PROJECTS

Virus Spread in Social Network Modeling - Network Modeling	Jan 2023 - Present
• Working with Dr. Ahad Zehmakan (of ANU) to model virus spread in a social network to find interventions to reduce the population affected. • Performed simulations and proposed & developed experiments to reduce the virus spread by using network properties. • Currently working on developing strategies based on network properties and their physical significance to devise more effective solution.	
Graph Algorithms for dimensioned floorplans - Graphs, Python Development, Floorplanning	Jul 2022 - Present
• Developing GPlan , a software that accepts graph-based input to generate architectural floorplans. • Devised an algorithm to generate floorplans for one connected graphs and implemented dimensioning to rectangular and non-rectangular rooms. • Added block symmetry in floorplans for both one-connected & biconnected graphs and working on graph transformation to reduce the complexity.	
Monopoly Simulator - Development in Java	Oct 2021 - Nov 2021
• Simulated the classic US variant (2008 - 2021) of the Monopoly game implementing the concepts of object-oriented programming in Java. [code] • Created UML diagram , implemented design patterns and developed a GUI using JavaFx to display the game board while the players are playing.	

PUBLICATIONS

Automated Generation of Floorplans with Non rectangular Rooms	Journal name: Graphical Models Publication date: May 1, 2023
Authors: Krishnendra Shekhawat, Rohit Lohani, Chirag Dasannacharya, Sumit Bisht, Sujay Rastogi	

AWARDS AND RECOGNITIONS

Project exchange student with TU Braunschweig Indo-German Centre for Sustainable Manufacturing	Sep 2022
• Selected for a collaborative sustainability project on process optimization using mixed reality.	
ACM IKDD Uplink Intern SIGKDD, ACM India	May 2022
• Among the 10 students (out of 300+) selected for a deep learning project with ACM India.	

POSITION OF RESPONSIBILITY

Core Committee Member - Microsoft Learn Student Ambassador (MLSA), BITS Pilani Chapter	Sep 2019 - Present
• Helped in ideation and organisation of Cyber Houdini , a capture the flag event in APOGEE (the annual college Techfest) 2021 • Arranged a workshop from Microsoft professionals on Azure & participated in Indian Workshop on Applied Deep Learning (IWADL).	