

ARJUN PANWAR

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ACADEMIC PROFILE

School Grades

Class	Year	Subjects	Board	CGPA/Grades
Class XII	2022-2023	English, Mathematics, Physics, Chemistry, Computer Science	CBSE	Predicted - 98.80 % Mid Term - 98.00 %
Class XI	2021-2022	English, Physics, Chemistry, Mathematics, Computer Science	CBSE	97.40%
Class X	2020-2021	English, Hindi, Mathematics, Science, Social Science, Information Technology	CBSE	96.00%
Class IX	2019-2020	English, Hindi, Mathematics, Science, Social Science	CBSE	94.20%

SUMMER PROGRAMS AND INTERNSHIPS - ATTENDED

International

Harvard University | September 2022

Program	CS50x
Course	CS50
Program Director	David J. Malan
Topics	Including 10 problem sets, eight labs, and one final project
Award	Certificate of Completion

National

Amity University | June 2022

Program	Two-week Summer School Program
Course	Computer Science
Program Director	Prof (Dr.) Manoj Kumar Pandey
Award	Certificate of Completion

BEHAVIOURAL ATTRIBUTES AND TECHNICAL SKILLSETS

Behavioral Attributes

Leadership: Desirable interpersonal skills, Ability to work effectively with team

Teamwork: Collaboration, reliability, conflict resolution, cooperation, proactivity, and adaptability

Goal setting, deadline-driven, optimism, and quality control technique

Technical Skills & Competencies

Working Platform: Windows 8/10, macOS, MicrosoftOffice365

Analytical Software: MS Excel, MS Office, Google Analytics

Technical Skills: C, C++, Java Script, PHP, MySQL, HTML5, CSS, Ruby on Rails, React JS

Web Development: WordPress, Bootstrap, Joomla, Drupal, Weebly

Data Science: MATLAB, SAS, Azure

Machine Learning: Graph Lab Create, Scikit Learn, R, Arduino, Python, Pandas, Matplotlib

Data Visualization: Tableau, Data wrapper

3D Modelling: Autodesk Maya, Cinema 4D, Adobe Photoshop, Final Cut Pro, Adobe Illustrator

App Development: Android, iOS, Unity 3D, Net Beans IDE

UNDERGRADUATE ONLINE COURSES(MOOCs)

Palo Alto Networks Cybersecurity Academy | 2021-2022

Program	Palo Alto Networks Cybersecurity Professional Certificate
Skills Acquired	Authentication, Cryptography, Security Design, Enterprise Private Network, Network configuration Techniques, The connected Globe, Cloud Computing Security, Malware, Denial-of-Service Attack, Enterprise Private Network, Security Operation Center, SOC Elements, Infrastructure, and Advanced End Point Protection

University of Maryland | 2021-2022

Program	Entrepreneurship Launching an Innovative Business Specialization
Skills Acquired	Opportunity Identification, Management, Innovation, Entrepreneurship, Market Research, Business Model, Business Modeling, Value Proposition, Venture Capital, Investor, Investment, Entrepreneurship, Venture Capital, Financial Statement, Finance

LearnQuest | 2021-2022

Program	Cloud Computing Basics (Cloud 101)
Skills Acquired	Azure Services and APIs, Cloud Deployment Models, Cloud Service Platforms

Wesleyan University | 2021-2022

Program	Creative Writing The Craft of Plot
Skills Acquired	Short Story Writing, Fiction Writing, Creativity

Johns Hopkins University | 2021-2022

Program	HTML, CSS, and Javascript for Web Developers
Skills Acquired	HTML 5, CSS 3, Java Script, Frameworks of CSS- Bootstrap, Building a working webpage

Deep Teaching Solutions | 2021-2022

Program	Learning How to Learn Powerful mental tools to help you master tough subjects
Skills Acquired	Pomodoro Technique, Meta Learning, Test Preparation, Effective learning strategies, Renaissance Learning

Yale University | 2021-2022

Program	The Science of Well-Being
Skills Acquired	Life values including gratitude, savouring, Key to be Happy, Meditation

University of California, Davis | 2021-2022

Program	SQL for Data Science
Skills Acquired	Data Science, Data Analysis, Sqlite, SQL

Udemy | 2021-2022

Program	Ultimate Web Designer and Web Developer Course for 2021
Skills Acquired	Adobe Photoshop, Figma Designing, HTML, CSS, JS, jQuery, MySQL MySQL databases, Bootstrap, WordPress

Udemy | 2021-2022

Program	Artificial Intelligence A-Z Learn how to build an AI
Skills Acquired	Visualization, Artificial Neural Networks, Implementing A3C Visualizations

Udemy | 2021-2022

Program	Data Science A-Z Real Life Data Science Exercises
Skills Acquired	Data Mining, Tableau, Linear, Multiple, Logistic, Regression, SQL

UC San Diego | 2021-2022

Program	Computer Graphics
Skills Acquired	Ray Tracing, Direct Lighting, Path Tracing, Sampling, OpenGL Shading, Create realistic images of 3D scenes, Using real time OpenGL and GLSL programming

Harvard University | 2021-2022

Program	CS50's Introduction to Artificial Intelligence with Python
Skills Acquired	Artificial Intelligence Principals, Graphic search algorithms, Reinforcement Learning, Machine learning, AI in Python programs, Deep Learning, Neural Networks, Algorithms

University of Michigan | 2021-2022

Program	Python for Everybody Specialization
Skills Acquired	Python Programming, Python Syntax and Semantics, Data Structure, Tuples, SQL, JSON, XML, Data Base, Sqlite, Data Analytics, Data Visualization

OBJECTIVES AND GOALS

Vision and Overarching Aim

To ever be in a position of constructively channelizing, as many as possible of my versatile scientific, humanistic, communication, and organizational skills, converging with my competencies and capabilities in contributing to cutting-edge research, and scientific outreach to the general community in today's technologically connected global village.

Scientific Spirit

To cultivate the true spirit of science, whereby we are always prepared to modify our view about the universe, in the light of new discoveries, scientific breakthroughs, and other areas of ground breaking research.

Leveraging Mastery in Science and Mathematics

To leverage my 'inherent aptitude' and 'demonstrated passion' built over the years in the subject of astrophysics through my solid foundation in the critical areas of Theoretical and Applied Physics, Mathematics, Statistics and Chemistry.

Career in Astrophysical Research

To acquire the mastery in all the traditional Astrophysical topics, and, thereupon make concerted and sustained efforts to engage myself in the existing and emerging interdisciplinary research, as well as to build 'Astrophysical Models,' formulate hypotheses and put to test the same in the areas of Stellar Systems, Plasma Astrophysics and Relativistic Cosmology.

SKILLS, STRENGTHS AND COMPETENCIES

High Motivation Level and Research Orientation

Highly motivated, resourceful, creative, and an enthusiastic student, mentor, original thinker, and researcher endowed with demonstrable academic excellence, intellectual curiosity and vigor specifically in Pure Sciences and Mathematics.

Spirit of Excellence in Work

Passionate about empowerment of the self, spirit of excellence in work, total quality manifestation, and an introspective awareness of inner potentialities.

Strong Belief in Team Spirit

Good interpersonal skills and ability to establish and maintain effective working relation in a multicultural, multi-ethnic environment with sensitivity and respect for diversity.

Ethical Commitment and Accountability

Ethical, committed, and responsible. Adapts easily to new situations. Successfully handles a wide range of academic functions using a combination of critical reading, writing and allied technical skills.

Multitasking and Troubleshooting

Maintains focus in demanding work environments, under deadline and pressure conditions. Meets challenges head-on and invariably finds a way to effectively undertake and complete multiple assignments or tasks.

Software Skills

Well versed in MS OFFICE, C, C++, Shell, Python, OLAP, SPSS and Data Management and Analysis tools.

AWARD & HONOURS

International - Scholastic and Co-Scholastic

Computer Science Technology

DINO Labs, NITI Aayog, ATAL Innovation Mission | May 2022

Program	BRICS Math Competition (International online competition in Entrepreneurship from Grade I to XII)
Award	Certificate of Achievement

Science & Math

AP Scholar Award | July 2022

Award	Awarded by College Board for scoring more than 3.5 overall marks in AP Calculus BC, AP Physics C Mechanics, AP Physics 1 Algebra Based
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National Level Science Talent Search Examination | January 2021

Program	Unified Council- NSTSE
Award	Certificate of Achievement- 1409 All India Rank Physics (80 All India Rank) Critical Thinking (275 All India Rank)

Unified International Mathematics Olympiad | January 2021

Program	International Mathematics Olympiad
Award	Certificate of Achievement- 508 All India Rank Critical Thinking (8 All India Rank)

Science Olympiad Foundation | January 2021

Program	International Mathematics Olympiad
Award	Bronze Medal - 2 nd Rank

Science Olympiad Foundation | December 2020

Program	International English Olympiad
Award	Gold Medal - 1 st Rank

Science Olympiad Foundation | December 2019

Program	International Mathematics Olympiad
Award	Bronze Medal - 3 rd Rank

Academic/Others

International Award for Young People in India (IAYP) | October 2021

Program	IAYP is the most adaptable and successful youth empowerment program. The program has an established capacity for identifying hard issues and challenges associated with youth. Its framework is used by schools, youth organizations, community groups, correctional services, employers and government departments around the world in over 130 countries.
Award	Gold Medal

Avantika Group of Contemporary Artists and Intellectuals | October 2019

Program	International Talent search Essay competition as Avantika Cultural Olympiad
Award	Silver Medal

National - Scholastic and Co-Scholastic

Science & Math

I.C College of Home Science, Department of Food and Nutrition | June 2021

Program	Essay Competition 'Safe food today for Healthy Tomorrow'
Award	2 nd Prize - Certificate of Merit

Science Olympiad Foundation | December 2020

Program	National Science Olympiad
Award	Gold Medal - 1 st Rank

NAHEP-IDP by Department of Food and Nutrition, COHS, CCSHAU Hisar | June 2020

Program	Essay/Photo Competition 'Covid-19, Me and Nature My Observation'
Award	Certificate of Participation

Asian Biological Research Foundation (ABRF), Prayagraj | June 2020

Program	Covid-19, Biodiversity and Immunity
Award	Certificate of Participation

Little Angles School, Sonipat | May 2017

Program	National Indoor Aeromodelling Championship
Award	Certificate of Excellence

Academic/Others

High Ranking Coder | February 2022

Program	International online programming portals- Devpost, Codechef and Codeforces
Award	Winner of Hack Merced and other programming contests

Nehru Yuva Kendra (NYK) | January 2022

Program	For outstanding work in most of the social service programs carried out under the banner of Nehru Yuva Kendra (NYK), the largest non-political youth organization of its kind in the world working at grass root level to implement socially relevant community programs in India.
Award	National Youth Leadership

KVPY Fellow | September 2021

Program	The “Kishore Vaigyanik Protsahan Yojana” (KVPY) is a program started by the Department of Science and Technology, Government of India to encourage students of Basic Sciences, Engineering and Medicine to take up research careers in these areas. The aim of the program is to identify and encourage talented students with aptitude for research.
Award	Certificate of Excellence

BLTS - The Indus Entrepreneurs | March 2021

Program	Extraordinary demonstration in the creation of scalable business models for multiple startup ventures.
Award	Business Leadership Talent Spark (BLTS)

Little Angles School, Sonipat | October 2020

Program	Panel Discussion on Gandhian ideology
Award	Certificate of Participation and Youtube video

Educational Leader of the Year | September 2020

Program	A prestigious honor annually presented by the school after a thorough scrutiny of students involved in either direct or indirect instructional delivery of subjects, or co-supervision of students with the senior members of the school faculty.
Award	Certificate of Appreciation

Little Angles School, Sonipat | September 2020

Program	Speech Competition
Award	Certificate of Participation

The French Alliance of Rouen Normandie France | January 2017

Program	CONCOURS ROMAIN ROLLAND, French Olympiad
Award	Gold Medal

Sports

Little Angles School, Sonipat | November 2020

Program	Hurdle Race Annual sports meet
Award	Silver Medal - Certificate of Appreciation

Little Angles School, Sonipat | October 2019

Program	Tunnel Race Annual sports meet
Award	Gold Medal - Certificate of Appreciation

ENRICHMENT PROGRAM(s)

UNICEF | September 2022

Program Integrating Climate Change in UNICEF's Planning and Programming
Award Certificate of Completion

World Health Organisation | September 2022

Program Long-term care facilities in the context of COVID-19
Award Certificate of Completion

World Health Organisation | September 2022

Program WHO eLearning Caregiver Skills Training for Families of Children with Developmental Delays or Disabilities
Award Certificate of Completion

Stewart Science College (SSC), Cuttack | August 2022

Program Quiz on Blockchain, Cryptocurrencies & Related Technology
Award Certificate of Participation

LearnQuest | August 2022

Program AWS Cloud Practitioner Essentials Webinar - AWS Discovery Day
Award Certificate of Completion

IIT Guwahati | August 2022

Program Product Matters Bootcamp
Award Certificate of Completion

Birla Institute of Technology (BITS) Pilani | August 2022

Program Melas Quiz of Brainstorm'22
Award Certificate of Completion

Birla Institute of Technology (BITS) Pilani | August 2022

Program General Quiz of Brainstorm'22
Award Certificate of Completion

UNICEF | August 2022

Program Strategies to Strengthen the Social Service Workforce for Child Protection
Award Certificate of Completion

World Health Organisation | August 2022

Program COVID-19 Operation planning guidelines and COVID-19 Partners Platform to support country preparedness and response
Award Certificate of Completion

Birla Institute of Technology (BITS) Pilani | August 2022

Program Science Technology Quiz of Brainstorm'22
Award Certificate of Completion

Indian Institute of Management (IIM), Bangalore | July 2022

Program CineMania of Eximius 2022, IIM Bangalore Entrepreneurship Summit
Award Certificate of Participation

Institute of Global Professionals | June 2022

Program International webinar on “Innovation in Teaching Reading Amidst Pandemic”
Award Certificate of Participation

Institute of Global Professionals | June 2022

Program International webinar on “Literature Review for Researchers”
Award Certificate of Participation

ISERD India Analytics | June 2022

Program World Environment Day Quiz
Award 3rd Prize for being recognized as a warrior and a Certificate of Participation

SGT University, Gurugram | April 2022

Program Debate Competition on topic “Energy Conservation for sustainable future” during the “Earth Day-2019”
Award Certificate of Excellence

Gurukula Kangri | March 2022

Program Presented a paper on “*Studies on impact and current perspectives of recycling electronic waste Key for safeguarding environment*” at two days *National Conference and Exposition entitled E-Waste Management Challenges & Opportunities* organized by *Department of Computer Science*
Award Certificate of Participation

Hindu College of Engineering | February 2022

Program Innovate to Elevate” Project exhibition in collaboration with ATAL LAB and IID
Award Certificate of Excellence

Science Olympiad Foundation | December 2018

Program International Mathematics Olympiad
Award Certificate of Participation

TiE - The Young Entrepreneur | September 2022

Program A global program aimed at fostering our future generation of entrepreneurs, offering a comprehensive and well-structured curriculum to educate and groom high school students within a business environment to emerge as entrepreneurs and future leaders in a dynamic global environment, and equipping students with entrepreneurial skills.
Award Certificate of Participation

QUALIFIED COMPETITIVE EDUCATIONAL PREPARATION PROGRAMS

Exploring Research Potentialities N Space Dynamics-May-June 2022

Mode Of Selection	A coveted research exploration program organized by the Indian Institute of Astrophysics (IIA), Bangalore, Govt. of India, fiercely contested by aspiring astronomers and astrophysicists gauged through an aptitude test in physics, mathematics and astronomy, submission of original research papers and demonstrable evidence of hands-on laboratory work in elementary school sciences, etc.
Program Highlights	Selected Candidates undergo stimulating 'updating sessions' on current research being carried out at national and international Levels in Astrophysics. The two month long program is interspersed with strong deliverables in the form of individual and group Power Point presentations, project reports, and exploration of the possibilities of writing original refereed research papers

Training Program in Advanced Mathematics-July 2021

Mode Of Selection	A thoughtfully designed program conceived and implemented by the renowned Homi Bhabha Centre for Science Education (HBCSE). Mumbai, Govt. of India amongst would-be researchers in mathematics. The candidates are hand-picked from a highly competitive pool of students with academically proven track record in pure mathematics within and outside the school in all encompassing areas of Theoretical Accomplishments and demonstratable mathematical acumen.
Program Highlights	The well deserving participants are imaginatively assigned to work on advanced mathematical topics covering highly demanding areas of Graph and Field Theory, Group Theory, Riemannian and Euclidean Geometry and Matrix Manipulation. Revisiting the existing theorems and proofs in the mentioned areas and working out new approaches to solve old problems and arrive at hitherto unnoticed techniques remain the most exciting part of the program.

Kishore Vaigyanik Protsahan Yojana (KVPY)-June 2021 to September 2021

Mode Of Selection	A national level encouragement program for budding scientists conducted by the prestigious Indian Institute of Science (IISc), Bangalore, Govt. of India. Students are shortlisted after 2 grueling rounds-starting with a preliminary qualifying written examination followed by an interview session with top academicians and scientists from premier research institutions in India.
Program Highlights	Finalists, predominantly characterized by a promising caliber and spark for research in scientific domains undergo rigorous training in sciences and mathematics that includes significant lecture sessions by outstanding professors drawn from different parts of the world, laboratory sessions conducted by researchers involved in converging technologies, guided field trip, presentations, and talks organized by research associates working with Indian Institute of Science Education and Research (IISER) Mohali and Raman Research Institute, Bangalore.

PROFESSIONAL WORK EXPERIENCE & CAREER ORIENTED

Android App Development | 2020-2021

Skills Acquired Android Applications, Kotlin, XML, Higher Order Functionalities

Data Structures and Algorithms | 2020-2021

Skills Acquired Data Structures, Arrays- Both Single and double dimension, Basics of C, Linked List- all types Linear, Circular, Doubly, Tress, Graphs, Stacks and Queues

Spring Pod | 2021-2022

Program Powering up with SIEMENS Virtual Work Experience Program

Skills acquired This program aimed at sustainability and sources of power, to energy transmission and employability skills. I had an opportunity to take part in great quizzes and amazing activities, and I even got a chance to hear from leading industry experts along the way!

Sydney School of Entrepreneurship | 2021-2022

Program Virtual Startup Internship Smart Cities

Skills acquired Innovation, Entrepreneurship, Market Research, Business Model, Disruptive Innovation, Problem Solving, Innovation Management, Finance, Strategic Management

Forage | 2021-2022

Program Ready, Set, Agile! Virtual Experience Program

Skills Acquired Waterfall vs Agile, Agile tools and concepts, Role Assignments and Ceremonies, Agile Curve Balls, Agile Methodology and user stories.

Forage | 2021-2022

Program Cybersecurity Virtual Experience Program

Skills Acquired Design a phishing email simulation, Interpreting phishing results, Security Awareness Training, Problem solving and design thinking, Data Analysis and data presentation, Cyber Security

Knights of Safety Academy International Association of Chemical Safety | 2021-2022

Program COSHH Hazard Communication Awareness

Skills Acquired COSHH Hazard Pictograms, Workplace specific hazard Communication Training, Material safety data sheets, Training on Environmental and health hazards

Knights of Safety Academy International Association of Chemical Safety | 2021-2022

Program The COSHH 365 Software Certification™

Skills Acquired Editing Task Hazards and controls, Hazard risk ratings, Health Surveillance Procedures, Requesting and adding safety data sheets

Kaggle | 2021-2022

Program Intermediate Machine Learning

Skills Acquired Handle missing values, Non-numeric values, Pipelines, Cross Validation, Data leakage

Kaggle | 2021-2022

Program	Python Pandas
Skills Acquired	Functions and maps, Indexing, Selecting, and assigning, Grouping and sorting, Data types and missing values

White Hat Jr. | 2021-2022

Program	Applied Tech Curriculum AI and ML Applications in Space Tech and Driver less cars, Certified Data Analyst
Skills Acquired	Loops, Sequence, Binary Strings, Nested Loops, Python Programming, Conditionals, Logic Gates, Game Development, Mobile App Development, Artificial Intelligence, Machine learning, GUI Applications, Stacks and Queues

INDEPENDENT INITIATIVES AND STARTUPS

Public Transport Tracking System | April 2022

Aim	System to track the real-time location of public transport buses in the National Capital Region of India. It includes a location tracking android application, a backend server using Node.js, and a web interface using Google Maps and JavaScript APIs to display the current location of the transport.
Role	Assisted the team of Computer Engineers in developing the location tracking android mobile application.

Agri-Fly | August 2021

Aim	Provided drone-based services for the betterment of the farmers in remote villages of India. The drone carries fertilizers and water up to the height of 20 meters above the ground. It is used in sprinkling fertilizers and water effectively in the field, leading to various benefits for the farmers.
Role	CEO and Founder, Created the Base model for the Drone and also contacted the farmer of nearby villages and taught them advancements of technologies and their benefits.

ZelioTech Inc | July 2021

Aim	A tech Start-up to make Apps for Android and iOS like LocShare, Bloozap which are successfully published on Playstore.
Role	Co-Founder, Designed and Created Android and iOS Applications. LocShare: LocShare lets you share your location with your friends so that they reach your exact location. The app uses the GPS co-ordinates to get your location and the Haversine formula for calculating the distance between your current location and the target Location. It also acts as a compass for pointing towards the direction of the target location. Bloozap: Bloozap is a short Distance Chatting app which uses Bluetooth to communicate. Using this one can communicate over a distance of 20 metres for free.

RESEARCH INTERESTS

My overarching research goal is to solve real life problems broadly on Artificial Intelligence and Big Data. My research areas lie in the interdisciplinary fields of Data Driven Models, Machine Learning, Information Retrieval, Big Data, Natural Language Processing, Medicine and Healthcare based on Bio Informatics, Cloud Computing and an array of Cutting-edged technologies.

RESEARCH PUBLICATIONS, INVESTIGATIVE PROJECTS, CASE STUDIES

Published Research Papers

Title	Development of an Integrated Healthcare Analytics using Blockchain tools and techniques
Role	Researcher
Journal	International Journal of Research in Medical Science and Technology
ISSN	e-ISSN2455-5134; p-ISSN 2455-9059
Title	Employability of Data Mining Tools and techniques in the efficacious prediction of Medical Issues
Role	Researcher
Journal	International Journal of Research in Medical Science and Technology
ISSN	e-ISSN2455-5134; p-ISSN 2455-9059
Title	Leveraging Deep Learning methodologies to effectively predict Stock Market Trends
Role	Researcher
Journal	International Journal of Innovations in Applied Sciences and Engineering
ISSN	e-ISSN 2454-9258; p-ISSN 2454-809X
Title	Employability of Hybrid Cryptography for efficacious security safeguards of Cloud Linked Data
Role	Researcher
Journal	International Journal of Advanced Engineering
ISSN	ISSN 2457-0397
Title	Developing an efficacious Password authentication system method using three levels of security protocols
Role	Researcher
Journal	International Journal of Analysis of Basic and Applied Science
ISSN	ISSN 2457-0451
Title	Developing an advanced Machine Learning and Internet of Things (IOT) based system to devise an effective Healthcare Monitoring system
Role	Researcher
Journal	International Journal of Research in Medical Science and Technology
ISSN	e-ISSN2455-5134; p-ISSN 2455-9059

ACADEMIC PAPERS, WORKS AND PROJECTS

Project Name	Prospects for training a RNN model for accuracy in anticipating textual characters.
Skills Acquired	This project was based on utilizing Recurrent Neural Network (RNN) for an effective demonstration of the syntax-based language prediction in google collaboratory using the Gutenberg dataset.
Project Name	Developing a CNN Model and ensuring it's training for predicting enumerated images
Skills Acquired	<p>The project aimed at the implementation of ML Tools - Tensorflow and Convolutional Neural Network (CNN)- to predict the images coded from numeral 0 to 9.</p> <p>The Model was so trained to predict the images enumerated from 0 to 9. The highlight was employability of Batch-Gradient Descent algorithm to achieve enhanced accuracy.</p>
Project Name	Developing an integrated model by leveraging Natural Language Processing (NLP) and Support Vector Machine(SVM) to enhance the efficacy of predictions on Twitter US Airline Sentiment dataset.
Skills Acquired	The project addressed the significant issue of finding value in the important social media data- Twitter data Compilation of Twitter US Airline Sentiment dataset.The project aimed at figuring out the sentiments of the tweets by a logical application of Natural Language Processing(NLP) and Support Vector Machine (SVM) Models. An Integrated Model was developed to efficiently text mine the Twitter sentiments on the identified dataset.
Project Name	Leveraging of 'gradient descent' in plugging the loopholes associated with 'overfitting' of data to enhance the efficiency of predictive analytics on identified dataset (Boston Dataset and Combined Cycle Power Plant)
Skills Acquired	This study, envisaged the efficacious prediction of datasets derived from (Boston Dataset and Combined Cycle Power Plant). The highlight of the study was Minimization of cost Function "Cost Function quantified the error between predicted values and expected values and presents it in the form of a single real number." Work was extraordinary in achieving the results by maintaining the learning rate, thereby obtaining suitable parameters for accurate predictions
Project Name	SmartBrains Engineers & Technologist PVT LTD Noida, India
Skills Acquired	Prediction of the seasonal sales of the products for the clients using time series prediction on the data. Assisting in optimizing Production cost and planning a production plan based on statistical analysis of data; reduced client's cost of production by 7.6%. Analyzing market trends for the client's product using statistical analysis of the sale data
Project Name	Statistics For Data Science
Skills Acquired	Descriptive Statistics, Statistics Analysis, General Statistics

Project Name	Safety Enhancement System for Indian Railways
Skills Acquired	Targets to improve security issues through GPS Positioning, Radar System and moreover helping the train to move during the fog by also using thermal camera to identify objects in line with track. The project also imparts solution to detect and fix broken rail tracks preventing accidents.
Project Name	Learning Enhancement Tool
Skills Acquired	Developing an e-learning tool that uses concepts like flashcards, gamification, and spaced-repetition to accentuate learning process and help the user learn anything, called 'Merken'. Available as a standalone web and an android application working synchronously.
Project Name	Offroad Surveillance UGV
Skills Acquired	Designed a robot that can cruise on any terrain easily due to its adaptive suspension system and chassis design. It can stream real time video on mobile using ESP32 Cam module. The controller of robot is based on a 32-bit CPU with a frequency of up to 240MHz. It has a built-in 520 KB SRAM with an external 4M PSRAM. It has a combined 802.11b/g/n Wi-Fi + Bluetooth/BLE SoC module.

CONFERENCES & SEMINARS

iOThlon 2021, National workshop (Delhi technological University, New Delhi) “Research Methodology and Data Analysis”

Gained insight in basic dimensions of research and the concomitant need today to rethink about the assumptions that underlie historic paradigms of research.

Gained the technical know-how to review the literature, develop hypotheses, frame research design, identify sampling techniques and comprehend the role and relevance of the tools for data collection analysis and report writing

Training Program (Galgotias University, Greater Noida, Uttar Pradesh) “Recent trends in Artificial Intelligence and Machine Learning”

A team from IIT Roorkee in AI Research presented their work titled Constrained Policy Optimisation (CPO) which induces constraints motivated by safety for policy search in Artificial Intelligent agents deployed in real-world

7th International Conference on Big Data Analytics (BDA2019)

GPS, Google, Maps & Uber to Spatial Computing, Analysed and shared their original research Results, practical experiences and thoughts on big data from different perspectives including storage models, data access, computing paradigms, analytics etc.

LEADERSHIP POSITION

Agency	Digex Club July 2021-Present Digex is the photography and film-making student organization which serves as an outlet for photography enthusiasts to film and shoot short films, photos and much more
Role	Head of Technology
Accomplishment	To assist in the technical aspects like photo and video editing, maintaining the website of the club and conducting inter-school events
Agency	Enship Club January 2021-Present Enship is the Entrepreneurship Club of the school, focused on fostering interest in entrepreneurship among students by conducting several activities and competitions at school level.
Role	Director
Accomplishment	Providing technical assistance to the club by designing and maintaining the club website, preparing designs of banners and posters for several events and conducting tech-specific events
Agency	Drop Books September 2020- Present Dropbooks is a startup that aims to improve literacy across the country. It functions by collecting books at the doorstep of houses and helping NGOs build libraries for poor children to read.
Role	Founder
Accomplishment	Carrying out book collection drives at different locations and collaborating with several NGOs and delivering books to several libraries for poor children.
Agency	Singapore International Science Camp (SISC) December 2021 An advanced science program conducted jointly by National University of Singapore and Asia Pacific Center of Management Education for over a week at NUS.
Role	Participant
Accomplishment	Learnt about Lumen coding, 3D Printing, Augmented Reality, Fusion 360, DNA Segmentation etc.

INNOVATION

Robotic Hand Using Flex Sensors

Made this Robotic hand that can be controlled by a sensor glove (Based on the gesture movement of glove while you are wearing it) with flex sensors attached to the back of fingers—used Arduino.

Bristle Bot (Version-2)

This bot consists of 2 toothbrushes, can be directed in one particular direction, uses IR sensors so it can be controlled using light in the dark (Light following)

COMMUNITY SERVICES AND VOLUNTEER EXPERIENCE

Teach for India | December 2021-March 2022

Program	The Teach for India Fellowship is an opportunity for India's brightest and most promising youth, from the nation's best universities and workplaces, to serve as full-time teachers to children from low-income communities in under-resourced schools.
Sponsors	Standard Chartered, HDFC Bank, ORACLE,
Role	Participated in the Teach For India "Volunteer Program" in New Delhi from 16th Dec, 2021 to 30th March, 2022. I worked at Navyug School, Sarojini Nagar, Delhi as a part time volunteer and was part of Teach For India's first 'Bridge Volunteer Program' - a two-month-long, intensive curriculum that was built to 'bridge' the students' learning loss due to the pandemic

Nehru Yuva Kendra | September 2021 - January 2022

Program	The Nehru Yuva Kendra, an autonomous largest grassroot level youth organization, which channelizes the power of youth on the principles of voluntarism, self-help and community participation and has achieved unprecedented success in nation building activities, disaster and relief management.
Sponsors	Ministry of Youth Affairs & Sports Government of India
Role	Proactively Volunteer and discharged my duties and responsibilities for fund raising campaigns, mobilizing of youth in the semi-urban and rural settings for the implementation of NYK schemes and execute on ground the significant goals of health, hygiene and rural development programs for the marginalized sections of the society.

National Volunteer Service | August 2021-Present

Program	Involved in several volunteer activities ranging from UNESCO, UNICEF and UNDP funded programs on major themes of rural health and hygiene, social evils like female feticides and infanticide, blood donation drives, disaster management to spreading awareness about Right to Education (RTE) and Right to Information (RTI).
Sponsors	Nehru Yuva Kendra, Ministry of Youth Affairs and Sports, Govt. of India
Role	Took the cudgels of bringing around a positive change in the Govt. notified area of Mewat, Haryana infamous as a thriving ground for social malpractices of female foeticide and infanticide.

Helping the Senior Citizens | June 2021-Present

Program	Social initiatives to help the distressed senior citizens afflicted with eye related ailments of glaucoma, cataract, retinal displacement, etc. The program takes care of the patients right from diagnostic to post surgery stages in order to restore their vision.
Sponsors	Nirmal Charitable Trust, Haryana
Role	Displayed a lot of enthusiasm in reaching out to the marginalized section of senior citizens in Pipli, Kurukshetra, Karnal, Ambala and other adjoining districts in Haryana (the regions which I have frequently visited to render a helping hand in community services). The patients mainly vulnerable to post-surgery complications were taken care of by adopting certain medically advised precautions so as to enable their quick recovery.

People for Ethical Treatment of Animals (PETA) | May 2021-Present

Program	PETA India focuses primarily on the areas in which the greatest numbers of animals suffer the most in laboratories, food industry, leather trade, and entertainment business. PETA India investigates, rescues animals and puts every possible effort to improve the quality of life for animals.
Sponsors	Veestro, aBillion, MozzaRisella
Role	Fundraiser and Activist - Pro-Actively involved in spreading awareness on being kind to animals, creating petting zones in communities where children and adults feel happy to share living space. Campaign Leader and Fundraiser. Mobilized support for the cause of abandoned and homeless elderly blind people looked after the uncared old people and restored their health, dignity and faith in living a purposeful life.

Member at Rotary Club | December 2020-Present

Program	The mission of rotary club is to provide service to others, promote integrity, and advance world understanding, goodwill, and peace through our fellowship of business, professional, and community leaders.
Sponsors	Municipal Committee, Government of Haryana
Role	Served as a Rotarier for the past 5 years and have been taken several initiatives like distributing blankets in winter, serving water in summers and conducting several other activities at several times of the year.

Lions Club | August 2020-Present

Program	Lions Club is an international foundation that aims to improve health, well-being and support those in need through humanitarian services and encourage peace and harmony. The Clubs provides food for underprivileged and regularly organizes various health camps for a better well-being.
Sponsors	WHO, Bill and Melinda Gates Foundation, Anthem Foundation
Role	Participating in blood donation camps, health checkup camps and various others activities held by the club. Also responsible for maintaining all the records of the activities held at the Lions Club.

Global Peace Foundation, India | August 2019- December 2019

Program	Global Peace Foundation (GPF) is an international non-sectarian, non-partisan, nonprofit organization, which promotes an innovative, values-based approach to peace building, guided by the vision of One Family under God.
Sponsors	IBM, International Young Leaders Assembly, Business Mirror
Role	Worked for three months and conducted several activities like collection of clothes, books and household materials in different localities and donated it in slums.

Van Mahotsav - The Big Plantation Drive | June 2019-Present

Program	An annual month long drive involving students dedicated to the cause of tree protection and spreading of green cover in the national capital region.
Sponsors	School Ecology Club, 'Ecology Purists' in association with the Department of Forests and Horticulture, Govt. of Delhi
Role	Spearheading the movement of planting a hundred thousand saplings of popular North Indian trees like Mangifera indica (Mango), Emblica officinalis (Amla), and Azadirachta indica (Neem) in the Aravalli regions of Gurgaon, Faridabad, Palwal.

Spread Smile Foundation, Sonipat | March 2019 -Present

Program	It is an organization working in the field of education, health, environment, sanitation, and awareness of underprivileged children. The organization aims to inspire the children living in slums under destitute conditions, to study and to stop them from indulging in activities like begging and providing their families with basic medical and other facilities.
Sponsors	Sonipat Child Protection Society, Ujala Cygnus Healthcare Services
Role	Active Volunteer at Spread Smile Foundation on a mission to eradicate poverty, illiteracy and making world a better place by educating the underprivileged children.

EXTRA CURRICULAR ACTIVITIES

Agency	Bharat Mata Saraswati Bal Mandir 2020-2022
Role	School Headboy
Accomplishment	Successfully leading the prefectorial team to represent students' voice and interests in the administrative and academic functioning of the school. Achieved Distinctive acknowledgement from the school management, staff, and students in materializing the long-awaited establishment of new computer science laboratory by eliciting support from Government Funding Agencies

Agency	Bharat Mata Saraswati Bal Mandir 2021-2022
Role	President Mathematics Society of School
Accomplishment	Framed the complete documentation of the Vision mission and the action program of 'Number Crunchers' that went on to become hugely popular amongst the Student Mathematical Community. Infused a great deal of motivation in the junior and senior Mathematics Olympiads aspirants by invigorating the Regional Mathematics Olympiad Preparation Program through a series of periodic mathematical contests and competitions.

Agency	Science Popularization Association of Communicators and Educators
Role	Memberships-Professional Bodies and Amateur Associations
Accomplishment	Science Popularization Association of Communicators and Educators (SPACE) is an NGO working in the field of science popularization amongst the masses. It is a team of dedicated and eminent Astronomers, Science Communicators & Educators. Through astronomy it aims to spread science and an attitude of rationale questioning and experimentation amongst children.

Agency	Times NIE, The Times of India 2021-2022
Role	School Reporter, Student of the Year
Accomplishment	School representative to write for the Times NIE Student Edition. Published various articles on topics related to Health, Lifestyle, Environment, and Technological world. Weekly documented school with educational and motivational stories to showcase it to public and give latest updates about school activities.

ANNEXURE: International Hackathons- Scholastic and Co-Scholastic

S.No	Hackathon Name	Organized By	Hackathon aimed to address	Academic Session	Award
1	Hack Violet	Virginia Tech	Female-empowerment hackathon Overcome gender gap in technology by innovating and inspiring with code	2021-2022	My project was recognized as most relevant to real life situation, so it was given a special mention by giving \$25 and gift card Certificate of Participation
2	Hack the League	Hack the League	Empowering combination of technology and opportunities to generate practical solutions for real-world problems	2021-2022	Honor Code Certificate of Appreciation
3	yuHacks 2022	Google Developer Student Club at York University	Improves the lives of everyday people. The main theme was "Social Empowerment"	2021-2022	Letter of Recommendation for showcasing one of the best and relevant projects Gift Cards
4	VT Hacks	Virginia Tech	Project to address community and society problems and making it most creative and novel	2021-2022	Certificate of Participation
5	Hack NYU 2022	New York University	Four tracks for hacks are Health & Well-Being, Sustainability, Education, and Financial Empowerment.	2021-2022	Devpost recognition
6	Hack Merced VII	University of California	Four tracks for hacks are CyberSecurity, Education, Sustainability, Open Innovation	2021-2022	Winner of Hackathon Awarded with Hydroflask worth ₹20000, Gift Cards, Hydroflask
7	STEM Explorers Contest	Youth Pioneers in STEM	Solve various problems in STEM field by showcasing project and innovating a novel solution to it.	2021-2022	Devpost recognition
8	Celo x Huobi	Angel Hack	Innovative solutions to make a sustainable living	2021-2022	Devpost recognition
9	Polkadot Hackathon	Angel Hack	Building project with the help of blockchain to address global community	2021-2022	Devpost recognition
10	Mixed Reality Dev Hackathon	Microsoft	Tracks to solve real life problems with MR/VR	2021-2022	Devpost recognition
11	AWS Disaster Response Hackathon	Amazon	Improve Disaster Response with Machine Learning	2021-2022	Devpost recognition