



SARTHAK YADAV



ACADEMIC DETAILS

Year	Degree / Board	Institute	GPA / Marks(%)
---	B.Tech in Chemical Engineering	Indian Institute of Technology, Delhi	7.945
2017	AISSE, CBSE	Nav Uday Convent Sr. Sec. School	92.2%
2015	AISSE, CBSE	Raath International School	10/10

SCHOLASTIC ACHIEVEMENTS

- **Specializations:** Completed **Data Science and Deep Learning** specializations (15 courses) from Coursera (2020)
- Received **Letter of Appreciation** in class X from **Minister, Human Resource Development, Govt. of India** (2015)
- **Olympiad:** Awarded **Certificate of Excellence**, National Genius Search Examination [Mains], **97.7** percentile (2009)

INTERNSHIPS

- **SmallDay IT Services Pvt. Ltd., Bangalore:** *Prediction Models for Sales Price of used cars* (May 2020 - June 2020)
 - Processed raw data using **SQL** and Pandas to **remove outliers** and added features from the NHTSA Govt. database
 - **Engineered various features** including the %age profit for car sales with the focus on minimizing Mean Squared Error
 - Built a **Stacked Ensemble** of *Random Forests and Extremely Randomized Forests* using the **H2O.ai** ML framework in Python
 - Achieved a **R2** score of 0.9808, MAE - \$ 607 & RMSE - \$ 877 in 80/20 train-test split and 5-fold cross-validation tests

PROJECTS

- **Data Structures and Algorithms:** *Prof. Srikantha Bedathur* (Jan, 2020 - Aug, 2020)
 - **k-Nearest Neighbor Classifier for Image Datasets** built using Metric Trees based on Euclidean distance between images
 - Implemented **VP Trees** for an efficient **multidimensional search** for the nearest neighbours on the *MNIST Dataset*
 - **Built a system for handling Election Queries** using balanced BSTs and Binary Heaps based on vote counts
 - Implemented **Weak AVL Trees** to efficiently handle queries at Candidate, Constituency, Party, State, and Country levels
 - **SKU Inventory Management System** built using a **3-level Linked List** for efficient sorting based on different criteria
 - **Finding minimum-cost routes in a road network with variable turn penalties:** An application of Dijkstra's algorithm
 - **Transformed** road networks modelled as directed graphs into pseudo-dual digraphs by modelling edges as nodes
- **Carcinoma detection through Tissue Image using ML/DL:** *Kaggle Project* (Aug, 2020)
 - Identified and extracted features subsequently followed by implementation of CNN for classification of tissue
 - Benchmarked comparative performance of Logistic Regression, Naive Bayes, K-NN, SVM, MLP and CNN models
- **Viscous Flow through a horizontal capillary:** *Prof. Jyoti Phirani* (Jan, 2019 - Apr, 2019)
 - Simulated the flow of water through a horizontal capillary open to air using a multiphase model utilizing **ANSYS Fluent**
 - Implemented *continuum surface stress* model for Surface Tension Modelling; Results verified by *Washburn equation*
- **Design of PID controllers using various controller tuning relations :** *Prof. H. Kodamana* (Oct, 2019 - Nov, 2019)
 - **Performed comparative analysis** between P, PI and PID controllers using the Ziegler-Nichols tuning methods

TECHNICAL SKILLS

- **Programming Languages:** Java, Python, SQL, C, Dart, HTML, CSS, Sass; **Tools:** MS Visual Studio, Ansys, LaTeX
- **Data Science:** Pandas, H2O.ai, Numpy, Matplotlib, scikit-learn, BeautifulSoup, Seaborn, Statsmodels, Tensorflow, Keras

POSITIONS OF RESPONSIBILITY

- **Core Team Member, Wellness Club, BRCA:** *An initiative to create holistic wellness of students* (May, 2019 - Aug, 2020)
 - **Spearheaded a 2 tier team** of 4 CTMs and 25 representatives to manage events, hospitality, finance, publicity & outreach
 - Organized 12 events as **Overall Coordinator** of the 10-day YogaFest '19 including workshops, speaker session, musical evening, Run for Yoga and Yoga Competition to capture the attention of youth towards yoga; achieved a **footfall of 800+**
 - Managed regular Yoga and Meditation activities throughout the year; conducted 2-tier interviews for selection of the team
- **Mentor, BSW:** Providing academic assistance and counsel for a smooth transit to IIT (Jul, 2019 - Present)
 - Guided and mentored **6 freshers**, ensuring their comfort & stress management; Selected via a rigorous **3 tier process**

EXTRA CURRICULAR ACTIVITIES

- **YES+:** Completed the Youth Empowerment & Skills workshop for self-development by The Art of Living (Sept, 2017)
- **Rancho Labs:** Part of the Startup and initiative to impart technical & innovative education to early metric and HSC students
- **Tryst, Annual Technical Festival, IIT Delhi -19:** *Publicity Activity Head* (Feb, 2019 - Mar, 2019)
 - Managed the online campaign on social media with a goal of reach to 100 thousand people through likes on the official fb page
 - **Designed the map** for guiding attendees to prominent places where events were held; Helped manage attendees during the fest
- **Social Endeavors:** *NSS, IIT Delhi: Vidya Teaching Project and Old Age Home Project*
 - Volunteered regularly to teach high school students in Kendriya Vidyalaya and visited senior citizens living in Old Age Homes



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IIT COURSE

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B.Tech in Chemical Engineering	Indian Institute of Technology, Delhi	7.945

INTERSHIPS

- Year: 2020, Company: SmallDay IT Services Pvt. Ltd., Profile: Software Intern

COURSES DONE

Intro. To Computer Science, Material And Energy Balance, Numerical Methods In Chemical, Microeconomics, Special Module On Inner Development-ii, Chemical Reaction Engg I, Mass Transfer I, Process Dynamics And Control, New Venture Creation

POSITIONS OF RESPONSIBILITY

- Core Team Member, Wellness Club, BRCA (April, 2019 - August, 2020)
- wellness club, Club secretaries 2019-20 (April, 2019 - May, 2020)
- Mentor, BSW (July, 2019 - May, 2020)
- Team Member, Team Member (April, 2018 - April, 2019)
- Anchor, Speaker Session by Swami Mukundananda (February, 2019)
- Designer, BRCA Orientation (September, 2018)
- Team Member, IDY-18 (June, 2018)
- Coordinator, Mindfulness Workshop (April, 2019)