NEHA AGGARWAL

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ACADEMIC QUALIFICATIONS

Year	Degree/Certificate	Institute	CPI / %
2022	B.Tech	Indian Institute of Technology, Kanpur	8.7/ 10
2018	Grade XII -CBSE	Canal Valley Public School, Rewari, Haryana	90 %
2016	Grade X - CBSE	Canal Valley Public School, Rewari, Haryana	10/10

SCHOLASTIC ACHIEVEMENTS

- Received a **Pre-Placement Offer** for the role of **Product Manager** at **Urvija AI Pvt. Ltd.** as a part of Integrated Product Development Organization **(IPDO)**
- Secured an All India Rank **6481** in **JEE Advanced 2018** among 0.2 million shortlisted candidates and All India Rank **5716** in **JEE Mains 2018**
- Recipient of **Simran Mandeep Kainth Memorial Scholarship** in the academic year 2019 - 20 based on overall academic performance in the first year
- Secured **State Rank 5** and **Olympiad Rank 17** in Brilliant International Olympiad of Science (**BIOS**) organized by Flying Colors Educational Society

PROFESSIONAL EXPERIENCE

MOBILEUM INC. | DATA SCIENCE INTERN, Wholesale Roaming Deal Optimizer — *May'21– Aug'21*

OBJECTIVE	• Solved the roaming traffic optimization problem for the client so that the client's **revenue is maximized** in the deals • Optimally distributed the outgoing & incoming **roaming traffic** of operators involved in the deal considering various **commitments**
STRATEGY	• Solved a use case involving one client operator and two of its deal partners, which became foundation stone for the actual **product** • Formulated the **Discrete Linear Programming** use case using **PuLP** library which has integration with the official **Python API solvers** • Analyzed the problem using Lagrangian Multipliers, **linprog** function in the package **scipy.optimize** and **simplex solvers**
ADVANCEMENTS	• Designed the model of complex problem involving operators working in multiple countries and all having different wholesale roamingrates (**interval based, flat and unbalanced** rates) and all having different revenue commitments and forecasted traffics

URVIJA AI Pvt. Ltd. | DATA MONETIZATION INTERN, Product Development Vertical — *May'21– July'21*

PRODUCT DESIGN	• Developed strategies to collaborate different sectors which can share data to create unconventional products which benefits both • Developed a **Collaboration product** proposal for credit card fraud detection and alerting system using geographical data
PRODUCT CRITIQUE	• Built Business Requirement Document (**BRD**), Product Requirement Document (**PRD**) and Market Validation Research • Defined all **success metrics** (North Star Metrics, KPIs, Leading & Lagging Indicators, tangible & intangible benefits) for the product • Identified the **potential customers** of the product, their current behavior pattern and potential risks and mitigations for the product
IMPACT	• Created a roadmap to increase products by **10 folds** and managed to be in **top 5% performers** in the internship & received a PPO

TECHNICAL PROJECTS

Pavement Crack Detection and Segmentation Using Deep Learning | *Course Project (Mentor: Prof. Pranamesh)* — *Sept'20– Dec'20*

OBJECTIVE	• Worked on a dataset of over **11000** images to perform crack **classification** and **segmentation** with their segmentation masks
APPROACH	• Implemented **Inception V3** model for crack classification using **transfer learning** and achieved an accuracy of **99.5%** • Performed image segmentation using an **encoder-decoder** model called **U-Net** using **Keras** and **Tensorflow** frameworks in **Python**
RESULTS	• U-Net model produced annotations with max **intersection over union** score of **0.60** and **F1 score** (measure of test accuracy) of **0.65**

Data Visualization and Regression Modeling| *Kritsnam Technologies, IITK (Mentor: Prof. Sikhar Krishn Jha)* — *May'20– July'20*

OBJECTIVE	• Developed a light-weight technology using **supervised machine learning** model to enable ordinary citizens to track quality of water
APPROACH	• Extracted RGB data using **OpenCV** for 3 test strips each having test of **10+** chemical compounds & created **scatterplots** for analysis • Predicted concentration of impurities by **curve fitting** & used **gradient descent** algo for cost reduction of regression using **numpy**
RESULTS	• Obtained a **R-squared** score of nearly **75%** implying that we reduced the prediction error by ≈75% by using regression

Decryption of Ciphered Text Using Markov Chain Monte Carlo Methods | *Course Project (Mentor: Prof. Avijit)* — *Feb'21– April'21*

OBJECTIVE	• Designed an experiment based **stochastic system** to find key for a ciphered text generated using **Substitution Cipher** technique
APPROACH	• Developed a **key search method** based on first generating a random key and then swapping its letters to generate potential keys • Designed a **scoring function** to 'score' new keys on their correctness by exploiting the redundancy and patterns in language

POSITIONS OF RESPONSIBILITY

Assistant Placement Coordinator| *Students' Placement Office, IITK* — *Mar'20– Feb'21*

MANAGERIAL	• Planned and managed the logistics for all internship and placement processes including PPTs, tests, GDs and interviews. • Managed a database of more than **3000 companies** and online placement and internship portal for all campus students
LEADERSHIP	• Spearheaded a **team of 60** company coordinators responsible for coordinating the entire Internship & Placement season 2020-21 • Streamlined the placement and internship process in a **3-tier** team for **1200+** and **600+** students respectively.
IMPACT	• Developed liaisons with more than **50 corporate teams** in the Internship Drive and published Internship and Placement Insights • Recorded a total of **270+** internship offers and **800+** placement offers as a core team member in SPO in the year 2020-21

Company Coordinator | *Students' Placement Office, IITK* — *Mar'19 – Feb'20*

INITIATIVES	• Coordinated in the conduction of interviews, placement tests, GDs, Pre-Placement Talks in the Recruitment Drive 2019-20 • Helped managing **15 days** long first phase of placements, involving **400+** companies and **1000+** students • Coordinated with various company officials while helping them manage their **interviews** during Placement and Internship drive

ADDITIONAL VENTURES

MANAGERIAL	• Served as **Acting Maintenance Secretary**, Hall 6 & assisted warden, hall managers in management of **hall finances** & maintenance.
TECHNICAL	• Designed and fabricated a transmitter controlled aerodynamic model of Falcon F21 with the members of **Aeromodelling Club, IITK** • Worked on the **hardware development** of a Quadrotor with package delivering capabilities with **Team Aerial Robotics, IITK** • Developed a cost effective Ball Throwing Machine with a group of 6 members in the Secondary Manufacturing Processes Lab, IITK
SPORTS & CULTURAL	• Participated in Freshers' Night, 2018 with **Hindi Sahitya Sabha** members which gained an audience of around **1000+** people • Participated in track events (sprints, relay and hurdles) with **Athletics team, IITK** in the academic year 2018-19.