Sejal Sahu

Senior Year Undergraduate
Mathematics and Scientific Computing

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Academic Qualifications

Year	Degree/Certificate	Institute	CPI/%
2020 - Present	BS	Indian Institute of Technology Kanpur	**7.0**/10
2019	Class XII (CBSE Board)	St. Joseph's Convent Sr. Sec. School, Jabalpur	95.8%
2017	Class X (CBSE Board)	St. Joseph's Convent Sr. Sec. School, Jabalpur	10/10

Professional Experience

UI/UX Intern | Eezy Labs *(June'23 - July'23)*

Objective	• Refine existing **User flow** and **UI elements**, maintain & update the design system of the **AI Lifestyle Planner** app • Collaborate with **Product Manager** & **Developers** to **revamp** app sections including User Favorites, Profile Page • Ideation and implementation of **new features** including **Channels** for communication and custom **icons** & **graphics**
Approach	• Conducted **research** on competitor **UI/UX** designs, identified trends and proposed innovative improvements • Engaged in **usability testing** sessions, observed user interactions with UI and collected valuable feedback • Produced comprehensive interactive **prototypes** and **wireframes** of interface, using **Figma** & **Sketch** softwares
Impact	• Increased **user traffic** of the seed stage startup by almost **15%** by developing responsive and adaptive features • **Restructured** the **Onboarding process**, implementing strategic changes that led to **50%** reduction in its duration

Key Projects

- **Summer Analytics** | *Consulting & Analytics Club, IIT Guwahati* *(May'23 - July'23)*
  - Developed a health classification model using **XGBoost** and **LightGBM** classifiers, predicting health status with **90%** accuracy
  - Conducted thorough **Exploratory Data Analysis** to gain insights into the dataset's **distribution, correlations**, and **outliers**
  - Used **feature engineering** techniques like **one-hot encoding, scaling** and **label encoding** to capture hidden data patterns
  - Developed a **Neural Network** based **image-recognition algorithm** that performs accurate **classification of images**
  - Employed binary classifiers: **Logistic Regression, Random Forest, Decision Tree & KNN** in Capstone Project Hackathon
- **Escaping the Caves** | *Course Project: Prof. Manindra Agrawal, CS641A* *(Jan'23 - April'23)*
  - Implemented and did the **Crypt-analysis** of existing **Cryptography systems** and their security by decrypting **ciphertexts**
  - Deciphered **encryption algorithms** including **6-round DES, Vigenere, EAEAE(AES), Permutation** and **Caesar Shift Cipher**
  - Investigated the role of **finite fields** in cryptographic systems to evaluate security against potential mathematical attacks
- **Machine Learning** | *Course Project: Prof. Purushottam Kar, CS771A* *(Jan'23 - April'23)*
  - Formulated and implemented a **linear classification** model to crack an advanced **XORRO PUF** with **95%** accuracy rate
  - Constructed a **Decision tree algorithm** using **Entropy Maximization** approach, to operate on a basic **Hangman** game
  - Used **Ridge, Lasso, and Elastic-net Regression** techniques to build a linear model predicting O_3 and NO_2 values in air
- **Natural Language Processing** | *Udemy Guided Self Project* *(May'22 - June'22)*
  - Acquired basics of Python libraries like **spaCy, NLTK** for NLP tasks, and **Sklearn** for implementing NLP-based ML models
  - Built Text Classifier using **TfidfVectorizer** and **LinearSVC** with **84%** accuracy in categorizing texts as positive or negative
  - Performed **Sentiment Prediction** on the IMDb movie review database using NLTK's **SentimentIntensityAnalyzer**
  - Implemented a **Chat Bot** utilizing **RNN** to provide responsive and accurate answers to straightforward user queries

Technical Skills

- **Languages:** C/C++, Python, SQL, Dart, HTML/CSS • **Libraries:** NumPy, Pandas, Keras, Matplotlib, Seaborn, Sklearn
- **Utilities and Software:** NLTK, MATLAB, LaTeX, Flutter, MySQL, Adobe Photoshop, Illustrator, Figma, Da Vinci Resolve

Positions of Responsibility

Head, Design | *Techkriti'23, IIT Kanpur* *(May'22 - April'23)*

Objective	• Spearhead a **4-tier** team of **80**+ organizers and **500**+ volunteers to conduct 29th edition with a **30000**+ footfall • Coordinate the overall budget of **INR 18 million** to organize the festival as a part of a 23-member core team
Approach	• Led creation of **festival branding** including **banners**, **social media graphics**, effectively catering to audience • Collaborated with web team to create user-friendly designs for Techkriti's **Websites**, receiving **30k**+ unique clicks • Managed **vendor collaborations**, **contract negotiations**, & **quality control** for timely production of materials
Impact	• Garnered an additional **reach of 1 million** through four revamped **social media strategies** focused on the youth • Achieved **30% YOY growth** by the formulated strategies to enhance digital presence for **10**+ corporates

Relevant Courses

**online course *ongoing course

Data Structure and Algorithms	Linear Algebra and Differential Equations	Probability and Statistics
Introduction to Machine Learning	Modern Cryptology	Natural Language Processing**
Image Processing*	Real Numbers and Analysis	Numerical Analysis & Computing

Extra-Curricular Activities

Social	• Organised **Mega Blood Donation Drive** across three locations in Kanpur City engaging **300**+ volunteers
Managerial	• Served as the **Head Girl** in school, managed events; secured **Student of the Year** award for all-round excellence
Contests	• Secured **silver medals** in Jabalpur Sahodaya **Interschool Chess** and **Spell Bee** Competitions among **50**+ **schools** • Awarded **special mention** in Witty Weekend Vibes, **creative writing** competition conducted by ELS, IIT Kanpur