Riya Sanket Kashive

4th Year Undergraduate

Major: Civil Engineering | Minors: Cognitive Science, Linguistics, Computer Systems, Machine Learning

Portfolio:

Academic Qualifications

Year	Degree/Certificate	Institute	CPI/%
2022 - Present	B.Tech	Indian Institute of Technology Kanpur	8.2/10
2022	CBSE(XII)	Ryan International School, Sanpada	95.6%
2020	ICSE(X)	St. Mary's ICSE School, Koparkhairane	97.0%

Professional and Research Experience

Summer Analyst Internship | Deutsche Bank, Pune | Data Management Platform (Received PPO) *(May'25-July'25)*

- Devised a **predictive pipeline** using Oracle SQL and pandas to forecast **Runtime Accuracy anomalies** with 99% precision
- Developed a **high fidelity prototype** using **Angular and Node** integrated via **fastAPI** to monitor Runtime Accuracy Data
- **Optimized system architecture** by bridging legacy database architectures with modern asynchronous analytics frameworks

Carbon Data Analysis | Undergraduate Project | Mentor: Dr. Sruti S Ragavan *(Aug'25-Nov'25)*

- Refactored the platform by extending backend logic to support access for **multiple** organizations while maintaining data isolation
- **Generalized** the system to accommodate datasets of **multiple formats and seasons**, enabling **soil and basalt** sample analysis
- Iterated the UI design based on business requirements, resolving critical usability bottlenecks in the sample analysis workflow

Research on Environmental Modulators of Cognitive Productivity | Mentor: Dr. Anubha Goel *(Jan'25-Apr'25)*

- Quantified the impact of thermal stressors on **cognitive performance** by designing a **twin-chamber study** across 30–40°C
- Applied a **4x4 Latin square design** and Linear Mixed Effects Models (R) to account for individual variables and random effects
- Established a $20-22°C$ **optimal learning range** using PEBL, and proposed data-driven interventions for academic facilities
- Synthesized **research** findings into data-driven HVAC optimization strategies for enhancing well-being in institute infrastructure

Key Projects

Saathi Learning App — Foundational Learning and Numeracy | Mentor: Dr. Anveshna Srivastava *(Feb'25-Present)*

- Architectured and deployed a **bilingual, AI-driven pedagogical platform** (developed on Flutter and Firebase), featuring a question bank of 1,000+ and 20+ gamified learning modules aligned with **NEP 2020** standards live on the Google Play Store
- Conducted a **pilot user study** ($N = 14$) to measure interaction friction faced by children in the **absence of adult supervision**
- Developing a **formal research manuscript** based on **system telemetry and user-study data**, focusing on the efficacy of bilingual voice-first educational interfaces in narrowing the **digital divide** for underprivileged communities in Northern India

Studata | *Human AI Interaction (CS698Y)* | Instructor: Dr. Sruti S Ragavan *(Aug'25-Nov'25)*

- Evaluated bias and fairness on a student outcome dataset ($N = 4424$) using **context-justified** metrics to assess predictive equity
- Built a dashboard and integrated **explanability** via **SHAP** values locally and globally, to visualize 5 most significant contributors
- Conducted a **Cognitive Walkthrough** with **3 targeted user personas** to identify **usability issues** in the prototype

Companion Arbiter PUF | *Introduction to Machine Learning (CS771)* | Instructor: Dr. Purushottam Kar *(Jan'25-Apr'25)*

- Derived a **linear feature mapping** for ML-PUF architectures by mathematically modeling stage-by-stage delay **recurrences**
- Optimized a **Logistic Regression classifier** to **99.0% test accuracy** utilizing cross-validation and hyperparameter tuning
- Analyzed model performance using **RBF kernels**, evaluating training time and latency to assess hardware security vulnerabilities

Superwiser | *Human Computer Interaction (CS798H)* | Instructor: Dr. Sruti S Ragavan *(Jan'25-Apr'25)*

- Conducted semi-structured interviews ($N = 9$) across students and professors followed by thematic analysis as part of UX research
- Implemented **design decisions** and developed a **high-fidelity prototype on Figma** for **two predominant user flows**
- Conducted a **mixed method** usability study consisting of a systematic heuristic evaluation and **A/B testing** on paper prototypes

Flankers Study | *Introduction to Cognitive Science (CGS401)* | Instructor: Dr. Anveshna Srivastava *(Aug'25-Nov'25)*

- Replicated the Flanker Task with different modalities to test how semantic richness and familiarity modulate cognitive interference
- Analyzed **reaction time** distributions to demonstrate that overlearned symbols elicit higher **interference** than affective symbols

Relevant Skills

- *Programming Languages:* C, C++, LaTeX, Visual Basic, Python, Java, MATLAB, Shell, SQL, JavaScript, TypeScript
- *Software, Libraries and Frameworks:* TensorFlow, Next, Node, React, Angular, Express, fastAPI, Figma, Tableau, ngrok

Leadership and Social Impact

- **Overall Coordinator, Outreach Cell:** Logistical and **stakeholder management** for 5+ institute functions (200+ attendees)
- **Volunteer, Shiksha Sopan:** Taught English to 11th-grade students; analyzed pedagogical gaps in low-resource environments
- **Chair, ACM SIGCHI Student Chapter:** Drafted research proposals for Saathi and Real-time Captioning System (CDAP)

Relevant Coursework   *(*A grade and above | †ongoing course)*

Sociology of the New Media*, Deep Reinforcement Learning †, Human Centered Computing †, Data Structures & Algorithms, Introduction to Linguistics*, Linguistic Typology*, A Linguistic History of India †, Applied Probability and Statistics, Linear Algebra