Utkarsh Agrawal

Junior Undergraduate
Mathematics and Scientific Computing

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ACADEMIC QUALIFICATION

Year	Degree/Certificate	Institute	CPI/%
2021-Present	BS	Indian Institute of Technology, Kanpur	8.1/10
2021	CBSE(XII)	Saraswati Vidya Mandir, Dewas	86.8%
2019	CBSE(X)	St. Mary's Convent Sr. Sec. School, Dewas	98.4%

SCHOLASTIC ACHIEVEMENTS

- Secured **All India Rank 691** in JEE Advanced and **All India Rank 697** in JEE Mains among **1.1 million** candidates — *2021*
- Awarded Kishore Vaigyanik Protsahan Yojana (**KVPY**) fellowship, by DST, Government of India to top **1%** of **100K** applicants — *2021*
- Accredited as **NTSE Scholar** (National Talent Search Examination), awarded by NCERT to top **0.1%** of **1.2 million** applicants — *2019*

RESEARCH EXPEIENCE

Indian Institute of Management, Indore | Mentor: Prof. Ajit Phadnis (On-Site) — *May'23-Jun'23*

Objective	• To analyse the **impact investing** landscape in India, identify trends, enablers and challenges and **recommend policy measures**
Approach	• Reviewed **50+ media reports** and qualitatively analysed **10+ investors' interviews** to derive insights of the Indian ecosystem • Examined and synthesised **8+ government policies** on impact investments including that of **Germany** and **Brazil**
Result	• Formulated a **comparative policy analysis article** and classified the policies into **facilitator**, **participant** and **regulator** • Co-authored the research paper "Analysing impact investing in India" for the upcoming **India Strategy Conference-2023**

University of Waterloo, Canada | Prof. Ken Mckay — *May'23-Present*

Objective	• To develop an optimal **assessment** of C-level executives in **12 cognitive traits** and design a game for improved decision-making
Approach	• Examined **70+** available tests and **25+** training modalities conducting a **meta-analysis** from **30+** research papers and articles • Assessing each **test's suitability** based on statistical values of its **internal consistency** and **test-retest reliability**
Impact	• Drafting a **white paper** on assessing and bolstering C-suite intellectual traits for **organizational growth** and development

KEY PROJECTS

Grad Capital's Tech-Startup Showcase (High Prep Event) – Gold | Inter IIT Tech Meet 11.0 — *Jan' 23-Feb'23*

Objective	• To **build a prototype** and successfully pitch a **tech-based startup** with a novel solution post identifying an existing problem
Approach	• Examined value chain of **10+ sectors** and concluded **150+ user interviews** using **The Mom Test** for problem legitimization • Developed a scalable web app leveraging **distributed computing network** as a **20%** cheaper solution
Result	• Secured **First Position** and **offered funding** by Grad Capital by pitching a startup with an annual revenue of **$1.2 million**

Mental Health Analysis | Prof. Pragathi P. Balasubramani, IIT Kanpur — *Dec'22-Apr'23*

Objective	• Categorize individuals' mental health as **depressed or non-depressed** and analyze improvement through periodic testing
Approach	• Applied feature generation, chi-square selection, **SMOTE** and gaussian noise to clean and improve the provided dataset • Found threshold using **k-means** clustering and used **Random Forest** and regression techniques to build classification models • Plotted the **survival function** and applied **cox regression** on the data to analyse the improvement in person's health
Impact	• Developed **high-performing** classification model (auc-roc: **0.86**) for participant classification in experiments for the lab

Auto-Report Generator | Self- Project — *Nov'22-Dec'23*

Objective	• Develop a mechanism for generating **comprehensive reports** featuring performance graphs for individuals
Impact	• Utilized **Matplotlib** library and **colourmaps** to generate dynamic graphs, effectively visualizing performance trends • Utilized the **FDPD** library to **extract individual information** from a database, seamlessly populating professional reports

TECHNICAL SKILLS & RELEVANT COURSES

Languages: C, C++, Python, HTML
Utilities: MS Office, LaTeX, Google Collab, Figma

Fundamentals of Computing (**A**) | Probability and Statistic
Introduction to Electronics | Linear Algebra

POSITIONS OF RESPONSIBILITY

Editor, Vox Populi | Students' Journalism Body, IIT Kanpur — *May'23-Present*

Leadership	• Spearheading a team of **50+ Core Group Members** working on investigative reports, comics and video journalism pieces
Initiatives	• Worked with teams of **5+** members for **10** different articles on critical issues such as **Infrastructure Crunch** and **5G Research** • Surveyed 500+ students and interviewed 10+ administration representatives to collect insights on casual sexism on campus
Impact	• With a total of **47** posts in a year, generated a **75.15%** annual increase in reach with currently **4500+** Instagram followers

Secretary, IITK Consulting Group | Science and Technology Council, IIT Kanpur — *Aug'22-Mar'23*

Outcome	• Finished in **top-50** teams out of **2200+** teams in Convolve - A ML/AI hackathon for the future by Cisco - Epoch 1 • Analysed **energy consumption** of buildings in IIT Kanpur **deriving trends**, to aid the efforts for a carbon neutral campus • Aided in data transcription for **Google's AI4SG** project to reduce infant mortality and **mentored** a project for **25+** freshers