Aayush Kumar

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Employment History

2024 – Present	◫	**Research Fellow,** PROSE team, Microsoft, India.
2023	◫	**Quantitative Research Intern,** Quadeye Securities LLP, India.

Education

2020 – 2024	◫	**B.Tech., IIT Kanpur, India** Computer Science and Engineering. Cumulative Grade Point Average: *9.83/10*
2023	◫	**Semester Exchange, EPFL, Switzerland** Computer Science. Cumulative Grade Point Average: *5.4/6*
2017 – 2020	◫	**Senior Secondary Education, NPS HSR, Bangalore, India**. CBSE AISSCE, Percentage: *97.8%*

Publications

Conference Papers

1. **A. Kumar**, Y. Bajpai, S. Gulwani, G. Soares, and E. Murphy-Hill, "Why AI Agents Stiil Need You: Findings from Developer-Agent Collaborations in the Wild," in *Proceedings of the 40th IEEE/ACM International Conference on Automated Software Engineering*, To appear, Nov. 2025. 🔗 URL: https://arxiv.org/abs/2506.12347.

2. J. T. Liang, **A. Kumar**, Y. Bajpai, S. Gulwani, V. Le, C. Parnin, A. Radhakrishna, A. Tiwari, E. Murphy-Hill, and G. Soares, "TableTalk: Scaffolding Spreadsheet Development with a Language Agent," *ACM Trans. Comput.-Hum. Interact.*, Sep. 2025, Just Accepted, ISSN: 1073-0516. 🔗 DOI: 10.1145/3765286.

3. H. Goel, **A. Kumar**, and S. S. Ragavan, "End-User Programming is WEIRD: How, Why and What to Do About It," in *2023 IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC)*, 2023, pp. 41–50. 🔗 DOI: 10.1109/VL-HCC57772.2023.00013.

4. M. Amoozadeh, D. Daniels, D. Nam, **A. Kumar**, S. Chen, M. Hilton, S. Srinivasa Ragavan, and M. A. Alipour, "Trust in generative ai among students: An exploratory study," in *Proceedings of the 55th ACM Technical Symposium on Computer Science Education V. 1*, ser. SIGCSE 2024, Portland, OR, USA: Association for Computing Machinery, 2024, pp. 67–73, ISBN: 9798400704239. 🔗 DOI: 10.1145/3626252.3630842.

Pre-prints

1. **A. Kumar**, D. Prol, A. Alipour, and S. S. Ragavan, *To Google or To ChatGPT? A Comparison of CS2 Students' Information Gathering Approaches and Outcomes*, 2025. arXiv: 2501.11935 [cs.HC]. 🔗 URL: https://arxiv.org/abs/2501.11935.

2. N. Mehrotra, **A. Kumar**, S. Gulwani, A. Radhakrishna, and A. Tiwari, *TEN: Table Explicitization, Neurosymbolically*, 2025. arXiv: 2508.09324 [cs.CL]. 🔗 URL: https://arxiv.org/abs/2508.09324.

Conference Posters

1 M. Amoozadeh, D. Daniels, S. Chen, D. Nam, **A. Kumar**, M. Hilton, M. A. Alipour, and S. S. Ragavan, "Towards Characterizing Trust in Generative Artificial Intelligence among Students," in *Proceedings of the 2023 ACM Conference on International Computing Education Research - Volume 2*, ser. ICER '23, Chicago, IL, USA: Association for Computing Machinery, 2023, pp. 3–4, ISBN: 9781450399753. 🔗 DOI: 10.1145/3568812.3603469.

2 H. Goel, **A. Kumar**, and S. S. Ragavan, "Poster: End-User Programming is WEIRD," in *2023 IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC)*, 2023, pp. 274–275. 🔗 DOI: 10.1109/VL-HCC57772.2023.00051.

Awards and Achievements

2025 🔖 **Outstanding Reviewer**, iTiCSE 2025.

2024 🔖 **Research Proficiency Medal**, IIT Kanpur, India.
Awarded for best undergraduate research project by a graduating student in the Computer Science and Engineering department.

2022 🔖 **Academic Excellence Award**, IIT Kanpur, India.

2021 🔖 **Dr. Prateek Mishra Memorial Scholarship Awardee**, IIT Kanpur, India.

🔖 **Academic Excellence Award**, IIT Kanpur, India.

2020 🔖 **All India Rank 976**, Joint Entrance Examination - Advanced, India.

🔖 **All India Rank 4128**, Joint Entrance Examination - Mains, India.

Miscellaneous Experience

Reviewing Experience

2025 🔖 **External Reviewer, TEI 2026**

🔖 **Sub-Reviewer, ASE 2025**

🔖 **Reviewer, iTiCSE 2025**

2023 🔖 **Sub-Reviewer, ICSE 2024**

Teaching Experience

2023 🔖 **Tutor, ESC111: Fundamentals of Computing**, CSE Department, IIT Kanpur, India.
Taught a CS1 course to a class of 20-25 students once a week during the Fall 2023 semester.

Selected Projects

1 **Intersectionality in Oversampling on Social Attributes**, Semester Project, ML4ED Lab, EPFL, 2023, Built on the paper by Cock et al. to analyze the impact of intersectionality on different oversampling strategies for a behavioural predictive model in education.

2 **SoulFull: A Companion App for Binge Eating**, Course Project, EPFL, 2023, Designed a high-fidelity prototype for an app that supports people struggling with binge eating by applying fundamental interaction design principles. 🔗 URL: https://www.figma.com/file/OLqV3BIDvyHij9iheE4esL/.

3 **CoOpt: Comparing Optimisers**, Course Project, IIT Kanpur, 2023, Co-wrote a research paper that compared different ML optimisers on image classification and regression tasks. 🔗 URL: https://github.com/Aeyush10/CoOptPaper.

4 **A Whole New World: Infinite Procedurally Generated Terrain**, Course Project, EPFL, 2023, Designed and created a procedurally generated visualisation of infinitely extending mountainous terrain with dynamic camera movements. 🔗 URL: https://github.com/Aeyush10/CS341_Graphics_Project.

5 **DigiCampus**, Course Project, IIT Kanpur, 2022, Worked with a team to create a web application to simplify entry-exit logistics for students and faculty across college campus. 🔗 URL: https://github.com/ananya704/CS253.

6 **Parallel Optimised View Synthesis**, Course Project, EPFL, 2023, Researched and applied zero-order methods to locally maximise entropy of 2D images (visualisations) of a 3D dataset. Developed ideas, wrote code, and created a presentation for methods to efficiently parallelise the visualisations. 🔗 URL: https://github.com/PrateekSogra/CS677-Parallel-optimised-View-Synthesis.

7 **Bandersnatch: A C++ CUI Game**, Self Project, EPFL, 2021, An interactive game made in C++ with a narrative that branches out based on user performance in implemented mini-games. 🔗 URL: https://github.com/Aeyush10/Bandersnatch_for_fun.