Akshit **Sinha**

🌐 https://viciousaegis.github.io/ @ as3727@cam.ac.uk 🐙 github.com/viciousaegis 🎓 Google Scholar

Education

August 2026 **October 2025**	**University of Cambridge** M.Phil in Machine Learning & Machine intelligence	**Cambridge, United Kingdom**
July 2025 **July 2021**	**International Institute of Information Technology, Hyderabad** B.Tech (Hons) in Computer Science and Engineering	**Hyderabad, India**

Experience

May 2025 **May 2023**	**Precog Research Group** [🌐] *Undergraduate Researcher	Advisor: Prof. Ponnurangam Kumaraguru* Working on ideas in explainability, robustness and trustworthiness of neural networks, specializing in graph representation learning.	**Hyderabad, India**
Aug 2024 **May 2024**	**Adobe Research** *Research Intern* Worked on benchmarking large language models on a new iterative and contextual document updation task.	**Bangalore, India**
Aug 2024 **Jan 2024**	**Google DeepMind (formerly Google Research)	InfoNets** *Student Research Collaborator* Introduced a new benchmark to evaluate controversy detection models mimicking the real-world data distribution.	**Remote**
Oct 2022 **May 2022**	**AnkiDroid** [🌐] *Google Summer of Code 2022* Worked with AnkiDroid team on the Card Browser, made UI/UX improvements to the design, and ported features from the Anki Desktop app to AnkiDroid.	**Remote**

Publications
[* = Equal Contribution]

[2025] **The Illusion of Diminishing Returns: Measuring Long Horizon Execution in LLMs** [PDF]
Akshit Sinha*, Arvindh Arun*, Shashwat Goel*, Steffen Staab and Jonas Geiping
Preprint [**Arxiv**]

[2025] **A Graph Talks, But Who's Listening? Rethinking Evaluations for Graph-Language Models** [PDF]
Soham Petkar, Hari Aakash K, Anirudh Vempati, Akshit Sinha, Ponnurangam Kumarauguru and Chirag Agarwal
Preprint [**Arxiv**]

[2025] **A Cognac Shot to forget bad memories: Corrective Unlearning for GNNs** [PDF]
Varshita Kolipaka*, Akshit Sinha*, Debangan Mishra, Sumit Kumar, Arvindh Arun, Shashwat Goel and Ponnurangam Kumaraguru
Forty-Second International Conference on Machine Learning [**ICML**]

[2025] **Higher Order Structures for Graph Explanations** [PDF]
Akshit Sinha*, Sreeram Vennam*, Charu Sharma and Ponnurangam Kumaraguru
39th AAAI Conference on Artificial Intelligence [**AAAI**]

[2025] **Topo Goes Political: TDA-Based Controversy Detection in Imbalanced Reddit Political Data** [PDF]
Arvindh Arun*, Karuna K Chandra*, Akshit Sinha, Balakumar Velayutham, Jashn Arora, Manish Jain, and Ponnurangam Kumaraguru
5th International Workshop on Computational Methods for Online Discourse Analysis [**BeyondFacts - Best Paper**]

[2024] **Sanity Checks for Evaluating Graph Unlearning** [PDF]
Varshita Kolipaka*, Akshit Sinha*, Debangan Mishra, Sumit Kumar, Arvindh Arun, Shashwat Goel and Ponnurangam Kumaraguru
3rd Conference on Lifelong Learning Agents Workshop Track (CoLLAS) [**CoLLAS-W**]

Select Projects

Community Detection and Influencer Identification in Indian Social Networks   May'23 - Apr'24
Advisor: Prof. Ponnurangam Kumaraguru | In Collaboration with DRDO [🌐]

> Created an end to end system to identify online communities in social media, focusing on the Indian subcontinent.
> The system included (i) collection of data from various social networks, followed by preprocessing and cleaning of data, (ii) applying state-of-the-art algorithms to perform various analyses based on location, political preferences, common interests, etc, and (iii) combining and packaging both steps into a deliverable sweb application with a unifying dashboard.

Movie Genre Prediction with Language Models   Aug'23 - Dec'23
[CS7.403] Statistical Methods in AI | Source Code [🌐]

> Used various classical ML models as well as language models to predict the genre of movies from their plots on the publicly available IMDB movies dataset.
> We beat the scores reported in the original report for this task, and implemented complex architectures such as an LSTM, GRU and Transformers.

VASH   Aug'22 - Dec'22
[CS3.301] Operating Systems and Networks | Source Code [🌐]

> The Vicious Aegis Shell is a shell coded in C emulating the BASH shell. Includes features like piping, redirection, background processes, and more.

Teaching and Leadership Roles

[CS2.201] Computer Systems Organisation   *Teaching Assistant*   Jan'24-May'24
> Introductory course on low level computer architecture.
> Responsibilities included curating assignments, conducting weekly tutorials, and grading quizzes and assignment submissions.

[CS4.301] Data and Applications   *Teaching Assistant*   Aug'23-Dec'23
> Introductory course on data modelling and data systems.
> Responsibilities included curating assignments, conducting weekly tutorials, and grading quizzes and assignment submissions.

Open Source Developers' Group (OSDG), IIIT Hyderabad   *Club Coordinator*   Mar'23 - Feb'24
> Conducted an intra-college beginner hackathon with over 150 participants from year 1 and year 2.
> Conducted various events related to open source software, Linux systems, Google Summer of Code, and a weekly event "Open Source Saturdays".

Honours and Awards

Dean's List Fall'22   Awarded to top academic performers in an academic year.

JEE Mains, 2021   Achieved All India Rank < 1000 with a percentile of 99.94.

Academic Service

Reviewer	AAAI'26 [🌐]
Reviewer	LoG'25 [🌐]
Conference Volunteer	ICML'25 [🌐]
Organising Volunteer	ACM CompEd'23 [🌐]