Aman Priyanshu

Privacy-Preserving Machine Learning Expert | AI Security

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Education

Present – Aug 2023 | **Carnegie Mellon University** — **Pittsburgh, PA, USA**
MSIT — Privacy Engineering

Jul 2023 – Jul 2019 | **Manipal Institute Of Technology, MAHE** — **Karnataka, India**
B.Tech Information Technology *with Minors in Big Data Analytics*

Professional Experience

Present – Oct 2024 | **Anthropic | Model Safety Bug Bounty Program, Independent Contractor** — **Remote**
Participated in Anthropic's AI Safety Bug Bounty, focusing on CBRN and cybersecurity vulnerabilities. (NDA)

Aug 2024 – Jun 2024 | **Robust Intelligence | AI Security Research Intern** — **In-Person / San Francisco, CA, USA**
Jailbroke LLaMA-3.1(499×) & OpenAI(4.25× Attack Success Rate) in 24h [received media coverage]; Developed automated prompt-injections; Created million-scale harmful intent dataset for AI Safety.

Mar 2024 – Jan 2024 | **OpenAI | Red Teaming Network, Independent Contractor** — **Remote / San Francisco, CA, USA**
Participated in OpenAI led red teaming efforts to assess the risks and safety profile of OpenAI models. (NDA)

Aug 2023 – Aug 2022 | **Eder Labs R&D Private Limited | Privacy Engineer Intern** — **Hybrid / Delaware, USA**
Privacy-preserving ad recommendations (12x speedup); DP synthetic data generation for relational tables.

Research Experience

May 2024 – Aug 2023 | **Privacy Engineering Research** [🌐] — **Carnegie Mellon University, USA**
Independent Study | Advisor: Professor Norman Sadeh
Project: For prompt-engineering geared towards usable privacy & security.

Present – Aug 2023 | **OpenMined | Research Team** [🌐] — **Remote / United Kingdom**
Project Lead and Collaborator | Collaborators: Dr. Niloofar Mireshghallah
Project: The impact of epsilon differential privacy on LLM hallucinations.

Aug 2022 – Jun 2022 | **Concordia University** [🌐] — **Montreal, Canada**
MITACS Globalink Research Intern | Advisors: Professor Wahab Hamou-Lhadj
Project: Exploring machine learning for anomaly detection toolkit.

Honours and Awards

- Spark Grant Winner, NOVA Hackathon, Mar 2023
- Theme Category Winner, HackCMU, Sept 2023
- Second Runners-Up - ShowYourSkill (Coursera), Jun 2022
- AAAI Undergraduate Consortium Scholar, Feb 2023
- First Prize - HackRx by Bajaj Finserv, July 2021
- First Prize - ACM UCM Datathon, UC Merced, May 2021

Publications

S=In Submission, J=Journal, C=Conference, (* = Equal Contribution)

[S.1] **Are Chatbots Ready for Privacy-Sensitive Applications? An Investigation into Input Regurgitation and Prompt-Induced Sanitization** [Preprint]
[In Submission]

[C.1] **Through the Lens of LLMs: Unveiling Differential Privacy Challenges** [Presentation]
2024 USENIX Conference on Privacy Engineering Practice and Respect — **[PEPR@USENIX'24]**

[J.1] **Finding an elite feature for (D)DoS fast detection-Mixed methods research** [PDF]
Journal: Computers & Electrical Engineering, Volume: 98, Pages: 107705, 2021 — **[Computers & Electrical Engineering'21]**

Other venues of acceptances: AI4SG@AAAI'23, UpML@ICML'22, IEEE S&P'21, RCV@CVPR'21, and W-NUT@EMNLP'21.

Skills

Programming Languages Python, Java, Go, C++, C, C, SQL, Shell Scripting (Git & Bash)
Frameworks & Libraries PyTorch, Tensorflow, JAX, HuggingFace, FastAPI, AdaptKeyBERT & NERDA-Con (self-authored)
Relevant Coursework Prompt Engineering (17730), AI Governance (17716), Deep Learning (11785), Computer Technology Law (17562), Differential Privacy (17731), Information Security (17631), Usability (17734), Data Structures & Algorithms, OOPs, and Database Management.