

Devansh Gupta

Personal Website | guptadev@usc.edu | [Google Scholar](#) | [LinkedIn](#)

Education

University of Southern California

Los Angeles, California

Ph.D. in Computer Science; GPA: 3.76/4.0

Aug 2023 – Expected May 2028

Advised by [Prof. Meisam Razaviyayn](#) and [Prof. Vatsal Sharan](#).

Research Interests: Differential Privacy, Statistical Learning, Optimization, and Memory-Efficient Learning.

Relevant Coursework: Complexity Theory, Communication Complexity, Information Theory, Online Learning.

Indraprastha Institute of Information Technology, Delhi

New Delhi, India

B.Tech. in Computer Science and Artificial Intelligence; GPA: 9.45/10

Jul 2019 – May 2023

Publications and Preprints

*These authors contributed equally.

- **Devansh Gupta**, Cristóbal Guzman, Enayat Ullah, “Differentially Private Learning of Markov Chains: Near-Optimal Sample Complexity for Item and User Level Privacy,” Preprint, 2026. [Link](#).
- Enayat Ullah, Sai Aparna Aketi*, **Devansh Gupta***, Huanyu Zhang, Meisam Razaviyayn, “Efficient DP-SGD for LLMs with Randomized Clipping,” International Conference on Machine Learning (ICML ’26); also presented at TDPD ’26. [Link](#).
- Alex Mulrooney*, **Devansh Gupta***, James Flemings, Huanyu Zhang, Murali Annavaram, Meisam Razaviyayn, Xinwei Zhang, “Memory-Efficient Differentially Private Training with Gradient Random Projection,” Transactions on Machine Learning Research (TMLR ’26). [Link](#).
- **Devansh Gupta**, A. S. Poornash, Andrew Lowy, Meisam Razaviyayn, “A Stochastic Optimization Framework for Private and Fair Learning From Decentralized Data,” Transactions on Machine Learning Research (TMLR ’26); earlier version at PPAI@AAAI ’25. [Link](#).
- **Devansh Gupta**, Meisam Razaviyayn, Vatsal Sharan, “On the Inherent Privacy of Zeroth-Order Projected Gradient Descent,” Artificial Intelligence and Statistics (AISTATS ’25); **Oral** at OPT@NeurIPS ’24. [Link](#).
- Andrew Lowy, **Devansh Gupta**, Meisam Razaviyayn, “Stochastic Differentially Private and Fair Learning,” International Conference on Learning Representations (ICLR ’23); **Oral** at AFCEP@NeurIPS ’22. [Link](#).
- **Devansh Gupta**, Aditya Saini, Sarthak Bhagat, Shagun Uppal, Rishi Raj Jain, Drishti Bhasin, Ponnuram Kumaraguru, Rajiv Ratn Shah, “A Suspect Identification Framework Using Contrastive Relevance Feedback,” Winter Conference on Applications of Computer Vision (WACV ’23); related student abstract at AAAI ’22. [Link](#).
- **Devansh Gupta**, Vinayak Abrol, “Time-Frequency and Geometric Analysis of Task-Dependent Learning in Raw Waveform-Based Acoustic Models,” 47th International Conference on Acoustics, Speech, and Signal Processing (ICASSP ’22), 2022. [Link](#).

Research Experience

Viterbi School of Engineering | University of Southern California

Los Angeles, USA

Graduate Research Assistant | Advisors: [Meisam Razaviyayn](#), [Vatsal Sharan](#)

Aug 2023 – Present

Viterbi School of Engineering | University of Southern California

Los Angeles, USA

Visiting Research Scholar | Advisor: [Andrew Lowy](#), [Meisam Razaviyayn](#)

May 2022 – Jan 2023

Cross-Caps Lab | IIIT Delhi

New Delhi, India

Undergraduate Researcher | Advisor: [Vinayak Abrol](#)

Apr 2021 – Apr 2022

Multimodal Digital Media Analysis Lab | IIIT Delhi

New Delhi, India

Research Intern | Advisor: [Rajiv Ratn Shah](#)

Jan 2021 – Jan 2023

Awards and Achievements

- One of 15 students selected across India for the IUSSTF-Viterbi Scholarship, providing full funding for a research internship at the Viterbi School of Engineering at USC.
- Dean’s List for Academic Excellence for academic years 2019–2020, 2020–2021, 2021–2022, and 2022–2023.

Talks

- *On the Inherent Privacy of Two-Point Zeroth-Order Projected Gradient Descent*
 - USC Theory Lunch 2024
 - OPT@NeurIPS 2024
 - ICCOPT 2025

Teaching Experience

- Teaching Assistant** | CSCI 618: Trustworthy Machine Learning from an Optimization Lens, USC *Aug 2026 – Present*
- Teaching Assistant** | CSCI 570: Advanced Analysis and Design of Algorithms, USC *Aug 2025 – Dec 2025*
- Teaching Assistant** | Machine Learning (PG), IIIT Delhi *Aug 2022 – Dec 2022*
- Teaching Assistant** | Machine Learning (UG + PG), IIIT Delhi *Jan 2022 – May 2022*

Mentorship and Leadership Experience

- Ph.D. Mentor** | IUSSTF Viterbi-India Program, USC *May 2026 – Jul 2026*
- Ph.D. Mentor** | IUSSTF Viterbi-India Program, USC *May 2025 – Jul 2025*
- Mentor** | USC SHINE Program *May 2024 – Jun 2024*
- Ph.D. Mentor** | IUSSTF Viterbi-India Program, USC *May 2024 – Jul 2024*
- Coordinator** | Robotics Club, IIIT Delhi *Jan 2020 – Jun 2022*

Reviewing Experience

- ICLR 2026; NeurIPS 2023, 2024, and 2026 (external); ISIT 2024 (external).