

Dr. Utkarsh Upadhyay
CTO/co-founder [Reason.ai](https://reason.ai)

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Work

Bringing clarity and meaning to public discourse using large scale machine learning driven models and methods at [Reason.ai](https://reason.ai).

Education

Jan '15 – Dec '22 Ph.D. Candidate at MPI-SWS, supervised by Dr. Manuel Gomez Rodriguez
Sept '09 – Feb '12 M.S. in Computer Science at EPFL, Switzerland, GPA: **5.7/6**
Aug '05 – May '09 B.Tech. in Electrical Engg. at Indian Institute of Technology, Kanpur; CPI: **9.5/10**

Work

Oct '19 – *present* CTO/co-founder at [Reason.ai](https://reason.ai)
Aug '18 – Nov '18 Academic Research Program Collaborator at Yahoo! Research (Oath Holdings), NY, USA
May '15 – Dec '17 Technical advisor for [SpeaQWith.Me](https://speaqwith.me) in Saarbrücken, Germany
Apr '12 – Dec '14 Data analytics, visualisation and web-client developer at Better AG, Zürich, Switzerland
Aug '10 – Feb '11 Internship at CCIL-NEC, Japan on *Information diffusion on Twitter*
May '08 – July '08 Internship at Microsoft Research, Redmond on *RoboCopy* replacement: *RoboClone*

Academic Honors

2017-19 Yahoo! Academic Research Program (ARP) Collaborator
2016 Travel award for attending KDD '16
2012 Awarded *Prix ECLA Informatique* for highest GPA in Computer Science MS at EPFL
2009-10 Awarded the Academic Excellence scholarship for studying at EPFL
2009 Silver medal at the programming competition ACM-SWERC '09
2005-09 Recipient of the Aditya Birla Scholarship (Given to 10 students all over India)
2005-06 Recipient of the Academic Excellence Award at IITK
2005 Secured 108th rank in Joint Entrance Examination for IITs (Percentile: 99.97%)

Selected Publications

- A. Singh, J. B. Hauge, M. Wiktorsson, **U. Upadhyay**. *Optimizing local and global objectives for sustainable mobility in urban areas*, Journal of Urban Mobility 2022.
- **U. Upadhyay**, G. Lancashire, C. Moser, M. Gomez-Rodriguez. *Large-scale randomized experiment reveals that machine learning-based instruction helps people memorize more effectively*, Nature (npj) Science of Learning 2021.
- P. Virtanen, *et al.* & **U. Upadhyay**. *SciPy 1.0: fundamental algorithms for scientific computing in Python*, Nature Methods 2020.
- **U. Upadhyay**, R. Busa-Fekete, W. Kotlowski, D. Pal, B. Szorenyi. *Learning to Crawl*. **Oral Presentation**, Association for the Advancement of Artificial Intelligence (AAAI) 2020.
- B. Tabibian, **U. Upadhyay**, A. De, A. Zarezade, B. Schölkopf, M. Gomez-Rodriguez. *Enhancing human learning via spaced repetition optimization*. Proceedings of the National Academy of Sciences (PNAS) 2019.
- **U. Upadhyay**, A. De, A. Pappu, M. Gomez-Rodriguez. *On the Complexity of Opinions and Online Discussions*. ACM Int'l Conference on Web Search and Data Mining (WSDM) 2019.

- **U. Upadhyay**, A. De, M. Gomez-Rodriguez. *Deep Reinforcement Learning of Marked Temporal Point Processes*. Conference on Neural Information Processing Systems (NeurIPS) 2018.
- A. Zarezade, A. De, **U. Upadhyay**, H. R. Rabiee, M. Gomez-Rodriguez. *Steering Social Activity: A Stochastic Optimal Control Point of View*. Journal of Machine Learning Research (JMLR) 2018.
- **U. Upadhyay**, I. Valera, M. Gomez-Rodriguez. *Uncovering the Dynamics of Crowdlearning and the Value of Knowledge*. ACM Int'l Conference on Web Search and Data Mining (WSDM) 2017.
- A. Zarezade, **U. Upadhyay**, H. Rabiee, M. Gomez-Rodriguez. *RedQueen: An Online Algorithm for Smart Broadcasting in Social Networks*. ACM Int'l Conference on Web Search and Data Mining (WSDM) 2017.
- S. L. Blond, C. Gilbert, **U. Upadhyay**, M. Gomez-Rodriguez, D. Choffnes. *A Broad View of the Ecosystem of Socially Engineered Exploit Documents*. Network and Distributed System Security symp. (NDSS) 2017.
- **U. Upadhyay**, I. Valera, M. Gomez-Rodriguez. *On Crowdlearning: How do People Learn in the Wild?* Workshop on Machine Learning for Education in Conference on Neural Information Processing Systems (NIPS) 2016.
- N. Du, H. Dai, R. Trivedi, **U. Upadhyay**, M. Gomez-Rodriguez, L. Song. *Recurrent Temporal Point Processes: Embedding Event History to Vector*. ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD) 2016.
- R. Khalili, N. Gast, M. Popovic, **U. Upadhyay**, J.-Y. Le Boudec. *MPTCP is not Pareto-optimal: Performance issues and a possible solution*. **Best Paper Award**, ACM SIGCOMM Int'l Conference on emerging Networking Experiments and Technologies (CoNEXT) 2012.
- G. Mermoud, M. Mastrangeli, **U. Upadhyay**, A. Martinoli. *Real-Time Automated Modeling and Control of Self-Assembling Systems*. IEEE Int'l Conference on Robotics and Automation (ICRA) 2012.

Technical skills

Programming	Python, JavaScript
OSS Contributor	CPython, scipy, scikit-learn, cvxpy, IPython, @first_tmrs_only , @musically-ut
Languages spoken	English (fluent), Hindi (native), German (B1)

Interests & activities

- My OSS contributions to SciPy and CPython) are on Mars in the Mars Rover '21.
- Invited talk at Yahoo! Research NYC on *RedQueen* in Dec. '17.
- Prizes in puzzle solving and programming competitions:
 - Won Startup Weekend Saarbrücken in May '15 and co-founded [SpeaQWith.Me](#)
 - Silver medal at Swiss national *HC²* '10 programming competition at EPFL
 - Silver medal at ACM-SWERC '09 programming competition at Madrid, Spain
- Positions of responsibility held:
 - Volunteer for NeurIPS 2017
 - Co-organized Machine Learning Summer School 2016 in Cádiz, Spain
 - Coordinator of SciMaTeX, the pure science events, and Tesseract, the online puzzle solving competition in Techkriti (technical festival) '08
 - Secretary for Electronics club and English Literary Society events in Antragni (cultural festival) '07
 - A problem setter for International Online Programming Competition, conducted in Techkriti '08
- Teaching activity:
 - Teaching assistant for Human Centered Machine Learning 2018-19 at Saarland University
 - Taught a tutorial on Point Processes in Machine Learning Summer School 2016 in Cádiz, Spain
 - Taught a tutorial on Network Analysis in Machine Learning Summer School 2017 in Tübingen, Germany
 - Teaching assistant for the seminar course on Social and Information Networks at TU-KL, 2016
- Reviewer for: ICLR ('20), ICML ('19,'18), NeurIPS ('19,'18,'17,'16,'15), ICDM ('19), WSDM ('16), KDD ('19,'16), IJCAI ('16), SDM ('16), WWW ('16), AISTATS ('16), AAAI ('21,'16), CIKM ('15)