

Utkarsh Upadhyay

PhD candidate at MPI-SWS

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Work & Education

Jan '15 – now	PhD Candidate at MPI-SWS, working with Prof. Manuel Gomez Rodriguez
May '15 – now	Co-founder of SpeaQWith.Me in Saarbrücken, Germany
May '15 – now	Co-founder of SpeaQWith.me in Saarland, Germany
Apr '12 – Dec '14	Software Developer at Better AG, web-client development and data visualisation
Aug '10 – Feb '11	Internship at CCIL-NEC, Japan on <i>Information diffusion on Twitter</i>
Sept '09 – Feb '12	MS in Computer Science at EPFL, Switzerland, GPA: 5.7/6
May '08 – July '08	Internship at Microsoft Research, Redmond on <i>RoboCopy replacement, RoboClone</i>
Aug '05 – May '09	B.Tech. in Electrical Engg. from Indian Institute of Technology, Kanpur; CPI: 9.5/10
Mar '04 – Mar '05	Class XII (ISC) from St. Dominic Savio College with 96.25% marks
Mar '02 – Mar '03	Class X (ICSE) from St. Dominic Savio College with 92.4% marks

Scholastic achievements

2012	Awarded <i>Prix ECLA Informatique</i> 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 108 th rank in Joint Entrance Examination for IITs (Percentile: 99.97%)

Technical skills

Programming	Typescript, Javascript, Python, R, C++, C, Java, Haskell, Ocaml
Other tools	Angular.js, D3.js, nginx, EC2, Meteor, gdb, L ^A T _E X, SCORM
Languages spoken	English (fluent), Hindi (native), French (beginner), German (beginner)

Work experience & Selected Projects

Jan '15 – Now	PhD Candidate , at Max Plank Institute - Software Systems Under the supervision of Prof. Manuel Gomez Rodriguez. Working on solving Machine Learning problems on large scale networks; e.g. on expertise evolution and information diffusion on crowd-learning platforms such as StackOverflow.
May '15 – Now	Co-founder , SpeaQWith.Me in Saarbrücken, Germany Founded the company during the StartUp-day, Saarbrücken in May 2015. The company offers video chat to people interested in learning each other's languages. Is being developed to help refugees integrate into Germany.
Apr '12 – Dec '14	Web-client development and data visualisation , at Better AG Third employee at the e-learning startup. Assumed various roles during the growth period. Currently developing a large customer facing single page client written in Typescript using Angular for administration and exposing analytics through visualisations made with D3.
Aug '11 – Feb '12	Thesis: Reliable comm. & control for the Smart Grid , under Prof. J. Le Boudec Designed and implemented high level communication protocols in Ocaml between the energy provider and Smart Home Controller with a service curve based approach to demand-response. Used C++ for controlling Hardware, Python for monitoring and ZeroMQ for IPC. Details here: http://musicallyut.in/docs/MS_thesis.pdf

Work experience & Selected Projects

- Aug '10 – Feb '11 **Investigating information diffusion in social networks**, under Dr. Satoko Itaya
Worked as an **intern at CCIL-NEC in Nara, Japan** on metrics for evaluation of participants in group discussions on Twitter. Wrote python based long running application to capture conversations and perform data analysis. See publications.
- May '10 – Jul '10 **Devising a top-down strategy for a swarm of robots**, under Prof. Alcherio Martinoli
Designed and optimized a top-down strategy to solve a variant of search and rescue problem which had been solved using bottom-up approach in order to compare the two approaches. Concluded that having a centralized strategy does not help in resource constrained settings. Details: See publications.
- May '08 – July '08 **Roboclone**, under Nikolaj Bjørner
Continued work during an **internship at Microsoft Research, Redmond** on a file copy program 'RoboClone', a replacement for RoboCopy found on Windows machine. It featured a resource adaptive threadpool and integrated Remote Differential Compression, using .NET Remoting for RPCs. Details here: <http://research.microsoft.com/en-us/people/nbjorner/rap.pdf>

Academic Publications

- N. Du, H. Dai, R. Trivedi, **U. Upadhyay**, Manuel Gomez-Rodriguez, Le Song. *Recurrent Temporal Point Process*, KDD 2016, San Francisco, USA.
- R. Khalili, N. Gast, M. Popovic, **U. Upadhyay**, Jean-Yves Le Boudec (EPFL). *MPTCP is not Pareto-optimal: Performance issues and a possible solution*. **Best Paper Award**, CoNEXT 2012, Nice, France.
- G. Mermoud, M. Mastrangeli, **U. Upadhyay** and A. Martinoli. *Real-Time Automated Modeling and Control of Self-Assembling Systems*. 2012 IEEE International Conference on Robotics and Automation, St. Paul, Minnesota, USA, May 14-18, 2012.
- **U. Upadhyay**, N. Yoshinaga, S. Itaya, R. Tanaka, T. Konishi, S. Doi, K. Yamada and P. Davis. *Evaluation of Participants in Group-discussions on Twitter*. Presented in 8th Applications of Social Network Analysis, Sept. '11. In *Procedia - Social and Behavioral Sciences* (Elsevier).
- G. Mermoud, **U. Upadhyay**, W. C. Evans and A. Martinoli. *Top-Down vs Bottom-Up Model-Based Methodologies for Distributed Control: A Comparative Experimental Study*. In 12th International Symposium on Experimental Robotics (ISER), Dec. 2010.
- R. Arora, **U. Upadhyay**, R. Tulshyan, K. Deb, J. Dutta. *A Parallel Randomized Algorithm for Solving Large Convex Minimax Problem*. 8th International Conference on Simulated Evolution and Learning (SEAL), Dec. '10. Appears in *Lecture Notes in Computer Science* (LNCS, Springer, Vol. 6475).

Interests & activities

- Co-organized and taught a tutorial at Machine Learning Summer School 2016 in Cádiz, Spain.
- Prizes in puzzle solving and programming competitions:
 - Active member of Stack Overflow.
 - Silver medal at Swiss national *HC²* '10 programming competition at EPFL.
 - Silver medal at ACM-SWERC '09 programming competition at Madrid, Spain.
 - 2nd place twice in Chaos programming contest (Techkriti '06 and '07).
 - 2nd place in 99 word story writing competition in Alfaaz '08, the literary festival.
 - 1st place in Electronic Circuit Design Competition, Techkriti '06.
- Position of responsibilities held:
 - Coordinator of SciMaTeX, the pure science events, and TesseractT, the online puzzle solving competition in Techkriti (technical festival) '08.
 - Secretary for Electronics club, English Literary Society events in Antragni (cultural festival) '07.
 - A problem setter for International Online Programming Competition, conducted in Techkriti '08.