

Swapnil Gandhi

sw2pnil@gmail.com • <https://swapnilgandhi.com/>

EDUCATION	M.Tech. (Research), Indian Institute of Science (IISc) Computer and Data Systems (CDS-CS) Advisor: Yogesh Simmhan Thesis: Distributed Programming Abstraction for Scalable Processing of Temporal Graphs	Aug 2017 – Jan 2020
	B.Tech., Bharati Vidyapeeth Pune Computer Engineering Department Honors and Gold Medalist	Jul 2010 – Jun 2014
PUBLICATIONS	[Papers & Posters available here .]	
	PEER-REVIEWED CONFERENCES	
	<p>[1] Swapnil Gandhi, Anand Padmanabha Iyer, “P³: Distributed Deep Graph Learning at Scale”, <i>In proceedings of the 15th USENIX Symposium on Operating Systems Design and Implementation (OSDI 2021)</i>, Jul 2021. Acceptance Rate: 31/165 = 18.78%</p> <p>[2] Swapnil Gandhi, Yogesh Simmhan, “An Interval-centric Model for Distributed Computing over Temporal Graphs”, <i>In proceedings of the 36th IEEE International Conference on Data Engineering (ICDE 2020)</i>, Dallas, Texas, April 2020. Acceptance Rate: 129/568 = 22.71%</p>	
	PEER-REVIEWED POSTERS	
	<p>[1] Swapnil Gandhi, “Wave: A Substrate for Distributed Incremental Graph Processing on Commodity Clusters”, <i>2nd ACM Student Research Competition (SRC) at 27th Symposium on Operating Systems Principles (SRC- SOSOP 2019)</i>, Ontario, Canada, Oct 2019. Received Bronze Medal, Student Research Competition (Graduate Category)</p> <p>[2] Swapnil Gandhi, Sayandip Sarkar, Abhilash Sharma, Yogesh Simmhan, “Distributed Querying over Compressed Property Graphs”, <i>Student Research Symposium at 24th IEEE International Conference on High Performance Computing, Data and Analytics (HiPC 2017)</i>, Jaipur, India, Dec 2017. Received Best Student Research Symposium Poster</p>	
AWARDS & HONORS	Selected to participate in The Cornell, Maryland, Max Planck Pre-doctoral Research School (CMMRS) 2020, Saarbrücken, Germany	Aug 2020
	Bronze Medal, 2 nd ACM Student Research Competition (Graduate Category), at SOSOP For “Wave: A Substrate for Distributed Incremental Graph Processing on Commodity Clusters”.	Oct 2019
	Won 12 th IEEE International TCSC Scalable Computing (SCALE) Challenge For “Dynamic Scaling of Video Analytics for Wide-area Tracking in Urban Spaces”.	May 2019
	Best Poster Award, 10 th EECS Research Students Symposium, IISc Bangalore For “Distributed Processing Model For Temporal Graphs”.	Apr 2019
	Invited to attend 3 rd RIKEN R-CCS HPC Youth Workshop, Kobe, Japan	Feb 2019
	Best Student Research Symposium Poster, IEEE HiPC, Jaipur, India For “Distributed Querying over Compressed Property Graphs”.	Dec 2017
	Department Honors, Bharati Vidyapeeth, Pune For outstanding academic performance (Batch 2010 – 2014).	Jun 2014
	TCS Popular Student Project, Bharati Vidyapeeth, Pune For “Mutation Testing Tool for C Programs”, Bachelors dissertation.	May 2014

**WORK
EXPERIENCE**

Research Fellow, Microsoft Research India Jul 2021 – Present
Mentor: Anand Iyer
Exploring techniques for improving training and inference performance of graph neural networks on modern hardware.

Software Engineer II, Microsoft Azure R&D India Mar 2021 – Jun 2021

Research Intern, Microsoft Research India Sep 2020 – Mar 2021
Mentor: Anand Iyer
Explored implications of combining model and data parallelism with independent graph partitioning for training graph neural networks at scale (P^3).

Research Intern, Microsoft Research India Mar 2020 – Aug 2020
Mentors: Bhargav Gulavani, Karthik Ramachandra
Worked on investigating and overcoming performance regressions in scalar UDF inlined queries.

Operations Engineer, PubMatic India Jun 2014 – Jul 2016
Worked on reporting and ad-hoc data processing pipelines using combination of Hadoop, Hive, and Pig.

SERVICE

Shadow PC External Review Committee Member, ACM EuroSys 2021 Oct 2020
Artifact Evaluation Committee (AEC) Member, USENIX OSDI 2020 Aug 2020
Artifact Evaluation Committee (AEC) Member, ACM ASPLOS 2020 Dec 2019
Artifact Evaluation Committee (AEC) Member, ACM SOSP 2019 Aug 2019
Treasurer and General Secretary for IISc ACM Student Chapter Apr 2019 – Mar 2020

**TEACHING
ASSISTANTSHIPS**

DS 256: Scalable Systems for Data Science, IISc Jan 2019
Graduate Teaching Assistant for DS 256. Handled weekly discussion sections, homework assignments and helped with class projects (≈ 10 students).

E0 261: Database Management Systems, IISc Oct 2018
Covered papers on Google’s Spanner and Apache Giraph. (≈ 30 students).

REFERENCES

Available upon request.

[CV compiled on 2021-07-11]