Swapnil Gandhi

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EDUCATION

M.Tech. (Research), Computer and Data Systems (CDS-CS) Aug 2017 – Jan 2020
Indian Institute of Science (IISc)
Advisor: Prof. Yogesh Simmhan
Thesis: Distributed Programming Abstraction for Scalable Processing of Temporal Graphs

B.Tech., Computer Engineering Jul 2010 – Jun 2014
Bharati Vidyapeeth, Pune
Department Honors and Gold Medalist

PUBLICATIONS

[Papers & Posters available here.]

PEER-REVIEWED CONFERENCES

[1] Swapnil Gandhi, Anand Padmanabha Iyer, "P^3: Distributed Deep Graph Learning at Scale", *(To appear) In proceedings of the 15th USENIX Symposium on Operating Systems Design and Implementation (**OSDI 2021**), Jul 2021.*
Acceptance Rate: $31/165 = 18.78\%$

[2] Swapnil Gandhi, Yogesh Simmhan, "An Interval-centric Model for Distributed Computing over Temporal Graphs", *In proceedings of the 36th IEEE International Conference on Data Engineering (**ICDE 2020**), Dallas, Texas, April 2020.*
Acceptance Rate: $129/568 = 22.71\%$

PEER-REVIEWED POSTERS

[1] Swapnil Gandhi, "Wave: A Substrate for Distributed Incremental Graph Processing on Commodity Clusters", 2nd ACM *Student Research Competition* (SRC) at 27th Symposium on Operating Systems Principles (**SRC- SOSP 2019**), Ontario, Canada, Oct 2019.
Received Bronze Medal, Student Research Competition (Graduate Category)

[2] Swapnil Gandhi, Sayandip Sarkar, Abhilash Sharma, Yogesh Simmhan, "Distributed Querying over Compressed Property Graphs", *Student Research Symposium* at 24th IEEE International Conference on High Performance Computing, Data and Analytics (**HiPC 2017**), Jaipur, India, Dec 2017.
Received Best Student Research Symposium Poster

AWARDS & HONORS

Selected to participate in The Cornell, Maryland, Max Planck Pre-doctoral Research School (CMMRS) 2020, Saarbrücken, Germany — Aug 2020

Bronze Medal, 2nd ACM Student Research Competition (Graduate Category), at SOSP — Oct 2019
For "Wave: A Substrate for Distributed Incremental Graph Processing on Commodity Clusters".

Won 12th IEEE International TCSC Scalable Computing (SCALE) Challenge — May 2019
For "Dynamic Scaling of Video Analytics for Wide-area Tracking in Urban Spaces".

Best Poster Award, 10th EECS Research Students Symposium, IISc Bangalore — Apr 2019
For "Distributed Processing Model For Temporal Graphs".

Invited to attend 3rd RIKEN R-CCS HPC Youth Workshop, Kobe, Japan — Feb 2019

Best Student Research Symposium Poster, IEEE HiPC, Jaipur, India — Dec 2017
For "Distributed Querying over Compressed Property Graphs".

Department Honors, Bharati Vidyapeeth, Pune — Jun 2014
For outstanding academic performance (Batch 2010 – 2014).

TCS Popular Student Project, Bharati Vidyapeeth, Pune — May 2014
For "Mutation Testing Tool for C Programs", Bachelors dissertation.

Best Undergraduate Project Award, TRDDC Annual Students Day, Pune — Apr 2014
For "Mutation Testing Tool for C Programs", Bachelors dissertation.

EXPERIENCE

Research Intern, Microsoft Research India — Sep 2020 – Mar 2021
Worked with Dr. Anand Iyer on systems that enable efficient machine learning over large graphs.

Research Intern, Microsoft Research India — Mar 2020 – Aug 2020
Worked with Dr. Bhargav Gulavani and Dr. Karthik Ramachandra on investigating and overcoming performance regressions in scalar UDF inlined queries. My work was later incorporated in SQL Server.

Operations Engineer, PubMatic India — Jun 2014 – Jul 2016
Worked on reporting and ad-hoc data processing pipeline using combination of Apache Spark, Storm, Hadoop, Hive, and Pig Latin.

Research Intern, TATA Research Development and Design Centre India — Sep 2013 – Apr 2014
Worked with Prasad Bokil, Ulka Shrotri, and R. Venkatesh on investigating and prototyping Mutation Testing Tool for C Programs.

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

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 lecture on Google's Spanner and Apache Giraph. (≈ 30 students).

TECHNICAL SKILLS

Languages: C/C++, Java, Python
Data Platforms: Spark, Hadoop, Giraph, Storm
ML Tools: PyTorch, TensorFlow

REFERENCES

Available upon request.

[*CV compiled on 2021-05-29*]