Swapnil Gandhi

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RESEARCH INTERESTS

Distributed Data Processing Abstractions and Frameworks, Databases, and Systems Infrastructure for Machine Learning

EDUCATION

Indian Institute of Science, Bangalore   Aug 2017 – Jan 2020
- M.Tech (Research), Department of Computational and Data Sciences (CDS)
- Advisor: Prof. Yogesh Simmhan
- Thesis : Distributed Programming Abstraction for Scalable Processing of Temporal Graphs
- CGPA: 9.2 / 10.0
  Selected coursework: Scalable Systems for Data Science, Topics in Database Systems, Database Management Systems, Linear Algebra and Applications, Introduction to Scalable Systems.

Bharati Vidyapeeth, Pune   Jul 2010 – Jun 2014
- B.Tech in Computer Engineering
  Department Honors and Gold Medalist
- Thesis : Mutation Testing Tool for C Programs
  Carried out at TATA Research Development and Design Centre (TRDDC), India

WORK EXPERIENCE

Research Intern, **Microsoft Research, India**   Sep 2020 – Present
- I currently work 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 overcoming performance regressions in scalar UDF inlined queries 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 under the mentorship of Prasad Bokil, Ulka Shrotri, and R. Venkatesh on building Mutation Testing Tool for C Programs.

PUBLICATIONS

[Papers & Posters available here.]

CONFERENCES

[1] <u>S. Gandhi</u>, and A. Iyer, "P3: Distributed Deep Graph Learning at Scale", (To appear in) 15th USENIX Symposium on Operating Systems Design and Implementation (OSDI) 2021.

[2] <u>S. Gandhi</u>, and Y. Simmhan, "An Interval-centric Model for Distributed Computing over Temporal Graphs", 2020 IEEE 36th International Conference on Data Engineering (ICDE), Dallas, Texas.

POSTERS

[1] <u>S. Gandhi</u>, "Wave : A Substrate for Distributed Incremental Graph Processing on Commodity Clusters", 2nd ACM *Student Research Competition* (SRC) at 27th Symposium on Operating Systems Principles (SOSP), Ontario, Canada, Oct 2019.

[2] <u>S. Gandhi</u>, S. Sarkar, A. Sharma, and Y. Simmhan, "Distributed Querying over Compressed Property Graphs", *Student Research Symposium* at 24th IEEE International Conference on High Performance Computing, Data and Analytics (HiPC), Jaipur, India, Dec 2017.

AWARDS & FELLOWSHIPS

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

- Bronze Medal, 2nd ACM Student Research Competition (Graduate Category), at   Oct 2019
  27th Symposium on Operating Systems Principles (SOSP) in Ontario, Canada

- 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, EECS Research Students Symposium, IISc Bangalore   Apr 2019
  For "Distributed Processing Model For Temporal Graphs" at the 10th EECS Research Students Symposium.
- 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
- Best Undergraduate Project Award, TRDDC Annual Students Day, Pune   Apr 2014
  For "Mutation Testing Tool for C Programs".

SERVICE & LEADERSHIP

- 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 & LECTURES

- Graduate Teaching Assistant, Indian Institute of Science   Jan 2019
  TA for DS 256: Scalable Systems for Data Science with Prof. Yogesh Simmhan. Handled weekly discussion sections, homework assignments and helped with class projects ($\approx$ 10 students).
- E0 261: Database Management Systems   Oct 2018
  Covered lecture on Google's Spanner and Apache Giraph. ($\approx$ 30 students).

REFERENCES   Available upon request.

[CV compiled on 2021-03-13]