

SAYAN GOSWAMI

Assistant Professor
School of Arts and Sciences
Ahmedabad University

Phone: +91 91238 48035
Email: sayan.nitd@gmail.com
Web: sayangoswami.github.io

EDUCATION

- Ph.D. Computer Science**, Louisiana State University, Baton Rouge August 2019
Dissertation: High-Performance Computing Frameworks for Large-Scale Genome Assembly
Committee: Kisung Lee (Chair), Seung-Jong Park (Co-Chair), Jianhua Chen
- B.Tech. Computer Science**, National Institute of Technology, Durgapur, India May 2011

PROFESSIONAL EXPERIENCE

- Assistant Professor of Computer Science, Ahmedabad University May 2021 - Present
Assistant Professor of Computer Science, LSU Shreveport August 2019 - May 2021
Graduate Assistant, Louisiana State University January 2013 - May 2019
Associate Technology, Sapient Global Markets July 2011 - January 2013

RESEARCH INTERESTS

Big data, distributed computing, high performance computing (HPC), computational genomics

PUBLICATIONS

- Sayan Goswami**. "Memory-efficient all-pair suffix-prefix overlaps on GPU", International Conference on Computational Science (ICCS), 2023.
- Sayan Goswami**, Kisung Lee, Seung-Jong Park. "Distributed de novo assembler for large-scale long-read datasets", IEEE International Conference on Big Data (Big Data), 2020.
- Sayan Goswami**, Ayam Pokhrel, Kisung Lee, Ling Liu, Qi Zhang, Yang Zhou. "GraphMap: scalable iterative graph processing using NoSQL." The Journal of Supercomputing, 2019.
- Arghya Kusum Das, **Sayan Goswami**, Kisung Lee, Seung-Jong Park. "A hybrid and scalable error correction algorithm for indel and substitution errors of long reads", BMC Genomics 20(11), 2019.
- Shayan Shams, **Sayan Goswami**, Kisung Lee. "Deep Learning-Based Spatial Analytics for Disaster-Related Tweets: An Experimental Study", Proceedings of the 20th IEEE International Conference on Mobile Data Management (MDM), 2019.
- Sayan Goswami**, Kisung Lee, Shayan Shams, and Seung-Jong Park. "GPU-Accelerated Large-Scale Genome Assembly", Proceedings of the 32nd IEEE International Parallel & Distributed Processing Symposium (IPDPS), 2018.
- Shayan Shams, **Sayan Goswami**, Kisung Lee, Seungwon Yang, and Seung-Jong Park. "Towards Distributed Cyberinfrastructure for Smart Cities using Big Data and Deep Learning Technologies", Proceedings of the 38th IEEE International Conference on Distributed Computing Systems (ICDCS), vision track paper, 2018.

- Arghya Kusum Das, Jaeki Hong, **Sayan Goswami**, Richard Platania, Kisung Lee, Wooseok Chang, Seung-Jong Park, and Ling Liu. "*Augmenting Amdahl's Second Law: A Theoretical Model to Build Cost-Effective Balanced HPC Infrastructure for Data-Driven Science*", Proceedings of the 10th IEEE International Conference on Cloud Computing (CLOUD), 2017.
- Arghya Kusum Das, Shayan Shams, **Sayan Goswami**, Richard Platania, Kisung Lee, and Seung-Jong Park. "*ParSECH: Parallel Sequencing Error Correction with Hadoop for Large-Scale Genome*", Proceedings of the 9th International Conference on Bioinformatics and Computational Biology (BICOB), 2017.
- Arghya Kusum Das, Praveen Kumar Koppa, **Sayan Goswami**, Richard Platania, and Seung-Jong Park. "*Large-scale parallel genome assembler over cloud computing environment*", Journal of bioinformatics and computational biology 15.03 (2017).
- Sayan Goswami**, Arghya Kusum Das, Richard Platania, Kisung Lee, and Seung-Jong Park. "*Lazer: Distributed Memory-Efficient Assembly of Large-Scale Genomes*", Proceedings of the IEEE International Conference on Big Data (IEEE BigData), 2016.
- Praveen Kumar Koppa, Arghya Kusum Das, **Sayan Goswami**, Richard Platania, and Seung-Jong Park. "*Giga: Graph-based genome assembler for gigabase scale genomes*." Proceedings of the 8th International Conference on Bioinformatics and Computational Biology (BICOB 2016). 2016.
- Chui-hui Chiu, Nathan Lewis, Dipak Kumar Singh, Arghya Kusum Das, Mohammad M. Jalazai, Richard Platania, **Sayan Goswami**, Kisung Lee, and Seung-Jong Park. "*Bic-lsu: Big data research integration with cyberinfrastructure for lsu*", Proceedings of the XSEDE16 Conference on Diversity, Big Data, and Science at Scale, ACM, 2016.

TEACHING EXPERIENCE

Courses designed & taught at Ahmedabad University:

- Introduction to Datastructures and Algorithms Monsoon 21
- Sequence Analysis Algorithms Monsoon 21
- Parallel Programming using GPUs Monsoon 21

Courses designed & taught at LSU Shreveport:

- Big Data Analysis Spring 21
- Introduction to Programming (Python) Spring 21, Fall 20, Summer 20, Spring 20
- Object-Oriented Programming I (Java) Spring 20
- Object-Oriented Design (Java) Spring 21, Fall 20, Spring 20, Fall 19
- Rapid Application Development (Visual C#) Fall 20, Fall 19

Teaching assistance at LSU Baton Rouge:

- Big Data Technologies Spring 18, Spring 17 and Spring 16
- Stats & Graph using Matlab Spring 18, Fall 14, Fall 13
- Computer Organization & Design Fall 17, Fall 15
- Computer Science I (Java) Spring 16, Fall 16
- Computer Science II (Java) Spring 18
- Cloud & Web Programming Spring 15
- Theory of Computation Fall 14
- Software Systems Development Fall 13

SERVICE CONTRIBUTIONS

At Ahmedabad University:

- Admissions Outreach Committee for BS in Computer Science Programme Monsoon 21
- Major Advisor for BS in Computer Science Programme Summer 21

At LSU Shreveport:

- Served in curriculum committees for Cybersecurity & Networking and Digital & Interactive Design, LSU Shreveport Spring 2020
- Served as an Academic Advisor for undergraduates in Computer Science Spring & Summer 2020
- Performed internal course assessments for ABET Accreditation Spring 2020

HONORS AND AWARDS

- Best Poster nominee at Supercomputing Conference November 2016
- Student travel award at IEEE BigData December 2016
- Student travel award at IEEE IPDPS May 2018
- LSU Graduate School Dean's Travel Award Fall 2018