

# Swarali Surana

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## EDUCATION

### Georgia Institute of Technology, Atlanta, GA

Aug 2021 onwards

Master of Science in Computer Science

Graduate Teaching Assistant for graduate level course : Database System Concepts and Design

Fall 2021 Coursework : Introduction to Graduate Algorithms, Database Systems Implementation, Computer Vision

### Maharashtra Institute of Technology, Pune, India

Aug 2014 - May 2018

Bachelor of Engineering in Computer Science

GPA: 3.82/4

## PROFESSIONAL EXPERIENCE

### Persistent Systems

Sept 2018 - July 2021

Senior Software Engineer

**IBM Netezza** - on premise Netezza Performance Server (NPS) database engine

- Contributed to design and deployment of Netezza, a high-performance data warehousing appliance with advanced analytics applications in enterprises - for uses including Business Intelligence and Predictive Analysis.
- Resolved Customer Escalations by providing Root Cause Analysis and fixes.
- Performed feature enhancements in components like System Manager, Planner and Optimizer, Live Disaster Recovery (Replication), System Health Check.

**IBM Netezza on Cloud** - cloud native deployment for Netezza Performance Server (NPS) database engine

- Worked on feature development for no downtime scaling of storage, connection manager between NPS and influxDB, implementing REST handlers for dashboard monitoring.

Earned two individual and one team award for this work.

## TECHNICAL SKILLS

Languages: C, C++, Python, Bash Scripting, Perl Scripting, Golang, Solidity, HTML, MySQL, PostgreSQL, SQLite3

Technology: Docker, Kubernetes, Openshift, Nodejs, Ethereum, REST framework, CUDA

## KEY PROJECTS

### Blockchain based Service Engine for Tangible Asset Management

Sept 2017 - Mar 2018

Senior Year Project sponsored by Persistent Systems Ltd

- Designed and developed a service-engine using Blockchain technology for Land Property Management.
- Implemented Smart Contracts for features like registering, buying, selling, leasing a property, maintaining its chain of custody, property auctions.

### Video Stabilization for Unmanned Aerial Vehicles (UAVs)

Feb 2017 - Mar 2017

First Runners up at Smart India Hackathon 2017 under Ministry of Defense

- Designed a client-server application to process and stabilize the jittery video captured through UAV drones and stream them to thin clients in near real time.
- Utilized high level feature tracking to identify transformation in consecutive frames of video, Lucas Kanade Algorithm to calculate optical flow, and averaging out transformations using moving averaging window
- Achieved near real time performance by using CUDA parallelism

## MAJOR FORUMS

- ACM India Summer School on Information Security and Forensics

May 2017

Theory and hands on learning for topics including Blockchain, Cryptography and Number Theory, Data Privacy, Digital Forensics Fundamentals, Mathematical Models of Computer Security, Mutual Trust Mechanisms, Network and Internet Security, Software and Application Security.

- Microsoft India Academic Research Summit

Jan 2017

Usage of technology for societal good

- Persistent Computing Institute's Winter School on Data and Functional Programming

Dec 2016

Integration of theoretical math concepts of  $\lambda$ -calculus in functional programming language 'Gofer'. Built a compiler and interpreter for functional programming language 'Gofer' in 'Gofer'

## AWARDS

- Two High Five Individual Awards from Persistent Systems for the work done on IBM Netezza in scaling tasks and solving critical defects and one Team Award for contributions to IBM Performance Server for Postgres Product
- First Runners Up at Smart India Hackathon 2017 under Ministry of Defense
- Winner in Idea Presentation Competition for Digitizing Healthcare

## EXTRA CURRICULAR

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- Conducted technical sessions in Linuxication workshop - 3 day event on less explored, interesting features of Linux ecosystem, 2016-2017
- Part of the Editorial team for technical newsletter of Maharashtra Institute of Technology (MIT) Computer Users Group, 2015-17
- Winner of inter-collegiate debate and elocution competitions, 2014
- Member of the college's cultural group and part of play called 'Mishmi' that won accolades in prestigious Firodiya Karandak (most coveted intercollegiate performing arts competition in Pune city), 2014-15