github.com/saurabh-deochake
linkedin.com/in/saurabhdeochake

SAURABH DEOCHAKE

(848)-239-8471
saurabh.deochake@gmail.com

EMPLOYMENT

Staff Site Reliability Engineer — **Twitter** — **Jan 2019-Current**

- Developed the technical strategy and roadmap as a **Tech Lead** for the Twitter's Google Cloud infrastructure team supporting teams running data and machine learning workloads Google Cloud and Twitter's data centers
- Designed and implemented BigBird: Twitter's exabyte-scale Big Data storage and analytics solution in Google Cloud that powers big data analytics and other key data warehouse functions of Twitter
- Led infrastructure cost efficiency efforts: designed and implemented CloudHawk, a FinOps service for efficient cloud cost management at Twitter saving more than $5M per year in OpEx
- Implemented GCP Admin, a RESTful service that enables self-service workflows to manage Google Cloud projects and resources for Twitter engineers; Reduced the turnaround time from 2 days to 3 minutes improving the velocity of public cloud adoption at Twitter
- Partnered with 300+ Twitter teams to consult, design, develop, and ship their products by leveraging public cloud technologies across Google Cloud (GCP) and Amazon Web Services (AWS)
- Received more than 30 spot awards from Twitter teams and peers recognizing various team and cross-organizational projects

Site Reliability Engineer — **Societe Generale** — **Feb 2018-Dec 2018**

- Developed low-latency monitoring solutions to monitor a distributed high-frequency trading infrastructure using Python, Bash, Elasticsearch, Logstash, and Kibana; Achieved three times faster performance compared to legacy monitoring solutions
- Designed and contributed to setting up the Internal Stock Market- a distributed system to facilitate trading for the clients of the bank globally
- Implemented Ansible Playbooks to automate frequent tasks and maintain uniform configuration across the infrastructure of ~1000 servers
- Provided active production support by resolving the issues at the application level, UNIX level, or network level to ensure high availability and low latency for users across the world

Cloud Software Engineer Intern — **Intel Corporation** — **June 2017-Aug 2017**

- Researched on NVMe over Fabrics (NVMe-oF) with solid state drive to derive a scalable, low latency, and high-performance cloud storage solution in Intel Rack Scale Design™ data centers
- Implemented 'conio'-a command-line tool for automated I/O benchmarking of Docker containers on NVMe volumes using Python. This tool is used by several teams for quick I/O benchmarking of containers
- Developed and contributed to Intel Snap plugin using Go to extract NVMe-based cloud storage telemetry and monitor NVMe over Fabrics using Docker containers orchestrated by Kubernetes

Software Engineer (R&D) — **NTT Data Americas** — **July 2012-Mar 2014**

- Implemented Central Logging System and 'Backup and Restore' System of GresCube™: a commercial distributed database service that guarantees minimal downtime and enhanced business continuity using Python
- Architectured six times faster disaster recovery operations module using various file synchronization, archive, and transfer utilities upon customer's requirements after the Megaquake of Japan by designing high availability services inside containers on RHEL Linux
- Analyzed and performed extensive research on issues with virtualization overhead caused by LXC Containers, KVM and OpenVZ, for distributed databases whose outcome became the foundation of GresCube™
- Developed Puppet and Kickstart scripts to automate the creation of web server components called PROSSIONE™

EDUCATION

New Brunswick, NJ — **Rutgers University** — **Jan 2016-Dec 2017**

- M.S. in Computer Science, Research Area: Distributed Systems and Cloud Computing. GPA: 3.4

SKILLS (YEARS)

- Python(9+), C(3+), Java(2+), Go(1+); Cloud- Google Cloud (5+), AWS (2+), Kubernetes(2+), Docker(3+), IBM Bluemix(1); IAC- Terraform (3+), Puppet(1+), Ansible (1); Observability- ElasticSearch(1), Logstash(1), Kibana(1), Grafana(1); Database-PostgreSQL(2+); Other- Linux(10+); GitHub(4+), Agile(2+), DevOps(7+)

TECHNICAL PROJECTS

- **Cloud Quota Monitoring System**- Implemented a service running on top of serverless Google Cloud Functions that scans 2500+ GCP projects to report current cloud quota consumption and alert teams for potential outages using Python, BigQuery, and Looker.
- **Functions-as-a-Service (FaaS)**- Implemented Terraform modules for the frictionless deployment of serverless workloads in the cloud by integrating them with Twitter's on-premise build systems using Terraform, Python, Cloud Build, and Google Cloud Functions.
- **Multi-Party Multi-Issue Negotiation Model (R&D)**- Innovated a module using principles of Game Theory to engage software agents in B2B/B2C eCommerce activities to provide automated auctions feature using Java, JSF, JavaScript, and Oracle.

TOP PUBLICATIONS AND BLOGS

- Smooth Sailing: The Resource Hierarchy for Adopting Google Cloud BigQuery Across Twitter; Google Cloud Blog **(Google Scholar)**
- How Twitter Maximizes Performance with BigQuery; Architecting with Google Cloud; Google Cloud Tech **(YouTube)**
- Identity and Access Management Framework for Multi-tenant Resources in Hybrid Cloud Computing; 17th International Conference on Availability, Reliability, and Security; Vol. 138; pp.1-8 **(DBLP)**
- An Agent-based Cloud Service Negotiation in Hybrid Cloud Computing; Fifth International Conference on ICT for Sustainable Development; Springer Advances in Intelligent Systems and Computing; pp.563-572 **(DBLP)**
- Comparative Study of Virtual Machines and Containers for DevOps Developers; Cornell University arXiv:1808.08192 **(DBLP)**
- HENRI: High-Efficiency Negotiation-based Robust Interface for Multi-party Multi-issue Negotiation over the Internet; CUBE 2012 International IT Conference, Pune, India; ACM Digital Library, USA; pp.647-652 **(DBLP)**

EXTRACURRICULAR

- Judge on a New Products Jury Panel for Stevie **American Business Awards**, Stevie **International Business Awards**, 2023 **SIIA CODiE Awards**
- **Gold Medal for the Best Research Project** awarded by Tata Consultancy Services for my undergraduate research project on Multi-agent Systems-based automated B2B/B2C eCommerce