

DIVYAANK TIWARI

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EDUCATION

Stony Brook University

MS in Computer Science Candidate

Stony Brook, NY, USA

August 2023 -

Sardar Patel Institute of Technology

BE in Computer Engineering (CGPA - 9.22/10)

Mumbai, MH, India

August 2016 - June 2020

EXPERIENCE

Associate Quantitative Developer (SDE - II)

MSCI

September 2022 - August 2023

Mumbai, MH, India

- Improved Exposure API response time by 5-20x across various instruments by implementing a gRPC interface.
- Implemented a Recursive Descent Parser to transform gRPC objects to custom domain objects.
- Developed a batch-processing utility that compares two XML files, and generates comparison reports.
- Implemented a Apache Ignite-based cache that backs the in-memory, Caffeine cache.
- Performed extensive performance engineering to optimize cache operations and reduce memory-footprints.
- Improved API response time by 5x for non-Equity Instruments and by 60x for Equity-based Instruments.
- Added Exposure computation support for Contract for Difference and Equity Index Derivatives.

Associate Site Reliability Engineer (SDE - II)

Analyst Site Reliability Engineer (SDE - I)

MSCI

January 2022 - August 2022

June 2020 - December 2021

Mumbai, MH, India

- Entrusted with the stability of Index applications and infrastructure as the Lead SRE for APAC shift.
- Appointed as the SRE SPOC for resolving Akamai CDN and WAF-related issues.
- Responsible for preventing SLA breaches in critical Index calculation and distribution batch jobs.
- Developed tool to extract performance metrics from the SOA-based Index calculation service.
- Created Splunk dashboards by using data from Index calculation service logs for detecting database bottlenecks.
- Promoted to an Associate, an year before the traditional duration.

Data Science Intern

Siemens

January 2020 - June 2020

Pune, MH, India

- Developed a Time Series model (Mean Absolute Percentage Error: 7.17%) for product sales prediction.
- Assisted in the migration of SCM Team's reporting platform to ThoughtSpot by designing database schemas.
- Modelled Product-delivery data present in SAP HANA as a Knowledge Graph using Amazon Neptune.

PROJECTS

XML Content Validation | *Java, bash, XSLT, colordiff, Docker*

February 2023 - May 2023

- Co-developed a utility that takes a pair of XML files with similar portfolio data, and produces difference reports.
- Leveraged XSLT to write rules for pre-processing and sorting files, depending on the underlying XML format.
- Improved execution time by eliminating comparisons between similar files by verifying their MD5 hashes.
- Leveraged colordiff and its various command-line flags to generate informative, HTML-based comparison reports.

application-infra-stats | *Python, bash, SQL*

June 2021 - February 2022

- Co-developed a Python utility for the routine aggregation and analysis of Index calculation service metrics.
- Implemented server-hopping logic to parse OSWatcher logs for fetching process and server-level statistics like VM usage, CPU usage, memory usage, load-average and logical number of CPUs.
- Designed custom SQL queries to fetch Index-level insights like the number and type of indexes calculated.
- Designed interactive Power BI visualizations to enable greater observability for all stakeholders.

SKILLS

- **Languages:** Scala, Java, Python, Shell Scripting (bash/ksh), SQL, JavaScript, HTML5, CSS3, C, Go
- **Operating System:** Linux (Oracle Enterprise Linux and Ubuntu)
- **Databases:** Oracle (12c/19c), SQL Server 2019
- **Frameworks:** Spring Boot, ReactJS
- **Developer Tools:** Git, Docker, Kubernetes, App Insights, Azure DevOps, VisualVM, JFR, Akamai, Splunk