

HARSH PATEL

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Technical Skills

Languages: Java, Python, JavaScript, Typescript, Swift, Scala, C, SQL, Shell, Ruby, React.

Tools: Git, Docker, Container, Kubernetes, Jenkins, Terraform, Ansible, Kafka, OCI, AWS, GCP, iOS.

Technologies: TensorFlow, PyTorch, Keras, REST, GraphQL, gRPC, GDB, Linux, Postgres, Elasticsearch, EC2, Redis.

Experience

Oracle

June 2022 – Present

Member of Technical Staff

Redwood Shores, California

- Contributed to the successful implementation of Federal Risk and Authorization Management Program (**FedRAMP**) compliance for the **ExaData Cloud At Customer**, yielding around **25% enhancement** in security measures. This ensured alignment with U.S. government standards and eligibility for federal contracts.
- Developed a migration tool that seamlessly transitions on-premise **ExaData infrastructure** across regions, reducing transition time by **more than 50%** and guaranteeing **zero downtime** and **no data loss**.
- Collaborated with multiple cross-functional teams and contributed to designing and implementing an advanced framework for monitoring **Oracle GuestVM** operations, resulting in a **more than 40%** reduction in diagnostic time.
- Automated the process of posting data plane events, resulting in around **75% reduction** in response time for **Oracle GuestVM** agent server or admin server even during downtime. Demonstrated ownership and responsibility by leveraging extensive experience with large codebases environment.
- Improved the **Keepalived**, which provides **high availability** functionality and **load balancing** module to guarantee node health, facilitating automatic switchover of master and standby nodes in the event of critical service downtime.
- Integrated a proficient feature in setting, managing, and securely storing sensitive database credentials and information using **Oracle wallets**, which utilize the **mkstore** utility for creating wallets, adding and rotating wallet contents.
- Led the project to develop a **SSL/TLS** certificate lifecycle management system that oversees the generation of Certificate Signing Requests (**CSR**), handling of Certificate Authorities (**CA**), Certificate (**CRT**), and Certificate Revocation List (**CRL**), alongside managing the **Keystores** and **Truststores**. Ensured seamless compliance with security standards and protocols, facilitating the transition from **HTTP to HTTPS** for fortified data security and integrity.
- Enhanced **Sanity check** system, which conducts pre-checks of the existing system in the event of a new install or upgrade. It integrates different unit test libraries, such as **jUnit** and **pytest**, for every system component and has an automated **Jenkins pipeline** that runs at scheduled times. Such a pragmatic approach fostered innovation, while self-motivation fueled our drive for success.
- Engineered and built a log monitoring system to gather error logs from distributed systems and send them to a central server using Chainsaw. This enables **SRE** to investigate system faults and take the appropriate action.
- Created and managed the inventory system, which is primarily used by operational personnel and can only be viewed in the event of an opt-in state by the customer, to extract system information such as Application **tuner patchers**, **CPS software versions**, **image information**, and other metadata to monitor and manage system performance.
- Designed and constructed log collection service to collect logs from highly secured and restricted customer VMs and upload them to the Oracle Cloud Infrastructure (**OCI**) **Object Storage bucket**, which DevOps can access via a Pre-Authenticated Request (**PAR**) **URL**, a secure way to grant temporary access.
- Implemented an endpoint enabling the secure download of the **Custom DB image** via Pre-Authenticated Request (**PAR**) **URLs**, facilitating delivery to customer VMs hosting the databases.

Quixote Automotive Technologies Pvt Ltd India

January 2020 – December 2020

iOS Developer

Ahmedabad, Gujarat

- Constructed an iOS application in MVVM architecture, deployed it to the **App Store**, and incorporated cutting-edge technologies such as **Firebase**, **Google Map SDKs** to execute custom navigation features with **real-time updates**, along with **push notification** functionality.
- Boosted UITableView and UICollectionView speed by **30%** through efficient use of background threads and **lazy loading**. Also integrated **REST APIs** and enhanced application security by encrypting custom objects in **Core Data**.

Education

University at Buffalo, The State University of New York

January 2021 – May 2022

Masters of Science in Computer Science and Engineering

Buffalo, New York.

Coursework: Algorithm Analysis and Design, Database Systems, Operating System, Machine Learning, Data Intensive Computing, Cassandra, MongoDB, Postgres.

Gujarat Technological University

June 2015 – May 2019

Bachelor of Engineering in Computer Engineering

Ahmedabad, Gujarat.

Coursework: Data Structures, DBMS, OOP in Java, Structured Programming in C, Computer Networking.