

Ameya Mohape

Github: github.com/mohapeameya

Email: mohapeameya@gmail.com

Mobile: +91-902-907-6253

WORK EXPERIENCE

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- **Oracle India Private Limited** Hybrid
Member of Technical Staff (Full-time) September 2020 - Present
 - Led the design and development of a Data Analysis Tool to visualize, analyze and inspect data across dimensions with support for hierarchical aggregation and drill-down with pivot tables and charts.
 - Modularized and integrated various Oracle data tools like Analytic Views and Data Insights into Data Analysis to give customers a seamless experience. Customers can load data, create Analytic Views, analyze and discover hidden insights through Data Analysis, and save these findings as reports in an *Analysis* in a single flow. These *Analyses* can also be exported to Oracle Analytics Cloud, Microsoft PowerBI, and Tableau.
 - Built an Add-in for Microsoft Excel that integrates Excel spreadsheets with Oracle Autonomous Database. Customers can query an Analytic View, run PL/SQL queries, and view their results in Excel.
 - Mentored and supported team members by reviewing code and applying knowledge and experience in the development process and technical leadership.

EDUCATION

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- **Indian Institute of Technology Bombay** Mumbai, India
Master of Technology - Computer Science Engineering; CPI: 8.42 June 2020
 - **Ramrao Adik Institute of Technology** Navi Mumbai, India
Bachelor of Technology - Computer Science Engineering; CPI: 7.89 May 2017

PROJECTS

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- **Elastic scaling using the libvirt API** April 2020
 - **Objective:** Build a generalized autoscaler that elastically scales the server application in response to varying loads.
 - Implemented an elastic autoscaling system in Python to monitor and autoscale the number of server VMs depending on the load from a client.
 - Verified that as the client/load-generator increases/decreases the load on the VMs, the autoscaler automatically scales up/down the number of VMs without losing any requests.
 - **Automatic Creation of Indices in PostgreSQL** April 2019
 - **Objective:** Automatically create indices on non-key attributes by considering the frequency of scans performed by PostgreSQL during normal query execution.
 - Modified the source code of PostgreSQL to extract and log the metadata of relation scans.
 - Created a daemon process in Python to periodically monitor the log and trigger index creation when the cumulative cost of relation scans exceeded a predefined threshold.
 - **Multi-threaded Key-Value Store and Load Generator** November 2018
 - Implemented a multi-threaded in-memory key-value store as a client-server application running over TCP sockets. Tested its performance with a self-developed closed-loop load generator.
 - Analyzed performance of the key-value server by varying the number of threads on the load generator.
 - **Expense Tracking System** December 2022
 - Built a web application using Django to track personal expenses and give smart insights to reduce future expenses.
 - Major features include visual insights through graphs, smart search, weekly/monthly/yearly report generation, and expense receipts storage.
 - **Wireless Network Security Software** April 2017
 - **Objective:** Build an application with the capability to detect access point vulnerabilities and suggest prevention techniques to increase security through automatic penetration testing.
 - The project focused on MitM, DoS, MAC address spoofing, and DNS spoofing attacks.
 - Developed a script to automatically capture the 4-way handshake and attack the access point using a dictionary and custom wordlist attacks.

SKILLS SUMMARY

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- **Languages:** JAVA, Python, Javascript, C/C++, SQL, Bash, HTML, CSS, PHP
 - **Tech Stack:** Spring, Django, React, React-native, jQuery, Knockout, OJET
 - **Tools:** Maven, GIT, Jira, Docker, PostgreSQL, Oracle DB, SQLite
 - **Platforms:** Linux, Windows, Android, Arduino, OCI, AWS, GCP

POSITIONS OF RESPONSIBILITY

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- **Interview Coordinator for Placements** IIT Bombay
Coordinated with a team of 250+ members for interviews of 1400+ students. December 2018
 - **Teaching Assistant** IIT Bombay
Assisted instructors with the grading of exams and assignments. July 2018 - June 2020