

Ameya Mohape

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WORK EXPERIENCE

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- Oracle India Private Limited** Hybrid
 - Member of Technical Staff (Full-time)* September 2020 - Present
 - Built the Data Analysis Tool from scratch to visualize, analyze and inspect data from Oracle Autonomous Database clearly and efficiently with pivot tables, 2D tables, and charts. Currently working on integrating Oracle Digital Assistant(ODA) into Data Analysis Tool to enable users to submit a natural language query.
 - Integrated the Analytic View module into Data Analysis Tool to give the user a seamless experience.
 - Modularized and integrated the Data Insights module into Data Analysis Tool.
 - Built an Add-in for Excel that integrates Microsoft Excel spreadsheets with the Autonomous Database to retrieve and analyze data from Analytic Views in the database. The user can run custom SQL queries and view their results in the worksheet.
 - 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 loss of any requests.
 - Automatic Creation of Indices in PostgreSQL** April 2019
 - Objective:** Automatically create indices on non-key attributes by taking into account 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 and tested its performance by 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 dictionary and custom wordlist attacks.

SKILLS SUMMARY

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- Languages:** Python, C++, JAVA, SQL, Bash,
 - Web Development:** HTML, CSS, Javascript, Knockout, jQuery, Django, OJET, PHP
 - Tools:** GIT, Jira, Confluence, Docker, PostgreSQL, SQLite, VirtualBox, L^AT_EX, Maven, PyCharm
 - Platforms:** Linux, Windows, Android, Arduino, OCI

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