Harshita Asthana

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# Education

**Arizona State University, Tempe, Arizona** Expected – Dec 2024

MS in Computer Science

*Coursework: Machine Learning, Deep Learning, Artificial Intelligence, Algorithms, Data Processing at Scale, Data Visualization, Data Mining, Knowledge Reasoning, Software Verification and Validation, Information Security and Assurance*

**Amity University, Noida, India** Aug 2008 – Jun 2012

B.Tech. in Computer Science and Engineering

# Work Experience

**IT Infrastructure Lead, Barclays Bank - Pune, India** Sep 2020 – Jan 2023

* Led team of 12 DBAs in Oracle database management, performance tuning, and troubleshooting.
* Migrated multiple databases to AWS cloud, resulting in a 30% performance boost and cost efficiency.
* Managed backup/recovery using RMAN, Datapump, and optimized disaster recovery solutions.
* Designed and deployed monitoring frameworks using OEM for database health and performance metrics.

**Consultant, T-Systems ICT India Pvt Ltd - Pune, India** Dec 2019 – Sep 2020

* Installed, configured, and maintained Oracle databases across multiple platforms.
* Spearheaded Oracle database migrations, performance tuning, and optimization for high-availability environments.
* Implemented data encryption and enhanced security protocols in compliance with industry standards.

**Oracle Database Associates, Tata Consultancy Services - Pune, India** Sep 2017 – Dec 2019

* Hands-on experience with installation and troubleshooting of ASM Grid and OEM Agent issues.
* Implemented robust backup and recovery strategies using RMAN, executing both online and offline backups and restores.
* Reviewed and provided feedback on code from peers.
* Maintained and updated documentation, adapting content as necessary. Diagnosed and resolved database and system issues.

**Database Administration Engineer, SunGard Availability Service - Pune, India** Sep 2016 – Sep 2017

* Proven experience in core DBA responsibilities such as database patching, schema creation and optimization, security administration, performance enhancement and other database-related tasks.
* Majorly worked on Disaster recovery Scenarios using various methodology like point-in-time recovery, Flashback Database, & Goldengate.
* Helped the project team with the implementation and performance improvement of databases on the insurance and financial projects.

**Senior System Engineer, Capgemini - Mumbai, India** Apr 2013 – Sep 2016

* Managed Oracle schema refreshes installed Shareplex/Streams and ensured data security using Guardium and Delphix.
* Took care of the Remedy and Service Now tickets within p99 time frame to meet the SLA.
* Configured Guardium, delphix and patrolling on production databases for privacy compliance and to secure data from ransomware.

# Projects

# MNIST Handwritten Digit Classification (Deep Learning)

* Objective: Achieved 98.89% accuracy in classifying handwritten digits using Convolutional Neural Networks (CNNs). Experimented with different model architectures (kernel size, feature maps) to optimize accuracy. Demonstrated expertise in deep learning and model tuning.
* Technologies: Python, TensorFlow, Keras

# NYC Taxi Hot Zone Detection (Big Data Processing)

* Objective: Analyzed large-scale taxi trip data to identify high-activity zones using Spark and Scala. Applied geospatial partitioning techniques and the Getas-Ord statistic to detect statistically significant clusters of high taxi activity.
* Technologies: Apache Spark, Scala

# Meal Detection System (Data Mining & Machine Learning)

* Objective: Developed a machine learning model using SVM and Decision Trees to classify meal and no-meal periods from glucose and insulin data. Successfully trained models with high accuracy using time-series feature extraction and employed k-fold cross-validation for performance evaluation.
* Technologies: Python, Scikit-learn, Pandas

# Business Locator System (NoSQL & Spatial Data Processing)

* Objective: Built a Python-based system that queries a NoSQL database (UnQLite) to find businesses based on geographic location and city name. Used spatial algorithms and the Haversine formula for efficient location-based querying.
* Technologies: Python, NoSQL (UnQLite)

# Awards and Certifications

* AWS Certified Cloud Practitioner
* Oracle Cloud Infrastructure Foundations 2020 Certified Associate

# Technical Skills

Python, Java, Oracle, PostgresSQL, NoSQL, AWS, MapReduce, Apache Spark, PyTorch, TensorFlow, ETL