

LILAVATI SHIVAJI MHASKE

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PROFESSIONAL SUMMARY

MSc Advanced Computer Science student with hands-on industry experience at Amazon in automation development, system analysis, and software quality improvement. Skilled in Python, AWS, distributed systems, data engineering, and ML workflows, with experience building full-stack and cloud-based applications from scratch. Recognised with national innovation awards and selected for the Leicester 100 Leadership Programme, demonstrating strong problem-solving and leadership potential.

EDUCATION

University of Leicester | MSc Advanced Computer Science

Key Modules: Internet & Cloud Computing, Big Data & Predictive Analytics, Mobile & Web Applications, Technology & Innovation Management, Cybersecurity Fundamentals

Leicester, UK

Jan 2025- May 2026

AISSMS Institute of Information Technology | BE Information Technology

Key Modules: Machine Learning, Data Structures & Algorithms, DBMS, Cloud Computing, Computer Networks, Web Technologies

Pune, India

Sep 2021- June 2024

Government Polytechnic Pune | Diploma in Computer Science Engineering

Key Modules: Java Programming, Operating Systems, Software Engineering, DBMS

Pune, India

June 2018– June 2021

TECHNICAL SKILLS

Programming: Python, Java, C, C++, JavaScript

Data Analysis & Engineering: EDA, Statistics, ETL, Feature Engineering, NumPy, Pandas, Snowflake

Databases & SQL: MySQL, MongoDB, Oracle, Advanced SQL

Machine Learning & AI: scikit-learn, YOLOv8, Model Evaluation, Generative AI

Cloud & Distributed Systems: AWS (EC2, VPC, S3, Lambda), NGINX, Redis Pub/Sub

Business Intelligence: Power BI, Tableau, Excel

Web & App Development: React, Node.js, Express, Firebase, Android (Java)

QA & Automation: unittest, Regression Testing, CI/CD, Logging & Diagnostics

Tools: Git, GitHub, Prometheus, Grafana, Wireshark

WORK EXPERIENCE

Amazon

Chennai, India

Quality Assurance Engineer Intern

Jan 2024 - June 2024

- Engineered modular Python-based automation frameworks (unittest) and developed scalable test scripts, automating 25+ end-to-end workflows and reducing manual effort by 20+ hours/week.
- Performed root-cause analysis on simulation vs hardware mismatches using logs, metrics, and behaviour traces, improving test reliability and defect detection accuracy by 30%.
- Designed and implemented comprehensive test strategies covering system integration, algorithmic behaviour, sensor interactions, error handling, and performance edge cases.
- Built a reusable logging, validation, and diagnostics toolkit, enhancing observability, improving debugging efficiency, and standardizing test output quality across teams.
- Identified, reproduced, and documented 50+ critical defects through exploratory, regression, and stress testing, strengthening overall software quality and release readiness.

AICTE & EduSkills (Supported by AWS Academy)

Remote

AI-ML Virtual Intern

May 2023 - July 2023

- Built and evaluated machine learning models using Python, scikit-learn, and Pandas, applying algorithms such as linear regression, k-means clustering, and decision trees on real-world datasets.
- Developed data preprocessing pipelines including feature scaling, outlier detection, and imputation techniques to enhance model accuracy and reliability.

- Simulated cloud-based deployment environments using AWS tools, incorporating principles of scalability, data security, and resource optimization.
- Applied ML solutions to real-world use cases such as fraud detection, risk modeling, and customer segmentation, demonstrating domain relevance in finance and product intelligence.
- Practiced end-to-end development of AI workflows, from data ingestion and model building to evaluation and production integration, aligned with modern SDE and data engineering practices.
- Emphasized clean code practices, reproducibility, and performance monitoring key for building reliable and scalable ML systems.

NoQs	Remote
Web Developer Intern	July 2023- Nov 2023
<ul style="list-style-type: none"> • Designed and developed responsive web applications using HTML, CSS, JavaScript, and React, enhancing user experience and accessibility. • Built and integrated RESTful APIs with backend systems using Node.js and Express, reducing server response time by 15%. • Conducted end-to-end testing and debugging of applications, improving overall application reliability and reducing errors by 20%. • Collaborated with cross-functional teams to implement Agile methodologies, resulting in a 10% increase in project delivery speed. • Optimized database queries and ensured secure data handling using MongoDB, improving database performance for high-traffic scenarios. 	

PROJECTS

Distributed Whiteboard Application | AWS, NGINX, Redis, WebSockets, Node.js

- Designed and developed the entire system from scratch, creating a distributed real-time collaborative whiteboard deployed on AWS (VPC, EC2) with NGINX reverse proxy.
- Implemented Redis Pub/Sub for scalable, low-latency event synchronisation across multiple nodes with built-in fault tolerance.
- Integrated Prometheus, Grafana, and AWS CloudWatch to monitor latency, throughput, concurrency, and system health.
- Conducted scalability, concurrency, and failure-mode analysis to identify bottlenecks and optimise system reliability and performance.

COVID-19 Big Data Analytics & Predictive Modelling | PySpark, ML, ETL

- Processed and analysed large COVID-19 datasets using PySpark, performing ETL, feature engineering, and exploratory visualisation.
- Built and evaluated classification models, improving performance using imputation-based preprocessing and statistical validation.
- Conducted trend and correlation analysis; evaluated models using accuracy, recall, precision, and F1-score.
- Delivered a complete big-data workflow demonstrating scalable processing, model optimisation, and insight generation.

CERTIFICATIONS:

- **Innovation with Design Thinking and AI IBM SkillsBuild (Apr 2025):** Applied design thinking methodology with AI concepts to develop user-centered solutions.
- **AWS Academy Machine Learning Foundations AWS (Jun 2023):** Supervised/unsupervised learning, model lifecycle, AWS ML workflows.
- **AWS Academy Cloud Foundations AWS (May 2023):** AWS cloud architecture, networking, and security principles.

AWARDS & LEADERSHIP

- **1st Place – ASPIRE-2K24 National Project Competition:** Awarded for developing an innovative drone-based pollution detection system using YOLOv8.
- **2nd Prize – NES Innovation Awards 2024:** Recognized for innovation and applied AI research in environmental monitoring.
- **Selected Member – Leicester 100 Leadership Programme (2025):** Chosen among top-performing students for the University's flagship leadership and professional development initiative.