Yashraj Bharambe

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EDUCATION

Master's in Computer Science Expected May 2025
Arizona State University, Tempe, AZ GPA: 4.0
Relevant Coursework: Data Mining, Cloud Computing, Data Visualization, Statistcal Learning Theory, Data Processing at Scale, Software Security, Software Verification and Validation Testing, Statistical Machine Learning.

BTech in Information Technology Jun 2023
Savitribai Phule Pune University (University of Pune), Pune GPA: 3.9
Relevant Coursework: Data Structures, Database Management Systems, Computational Complexity and Algorithms.

TECHNICAL SKILLS

Languages: Python, C++, Java, SQL
Web Technologies: HTML, CSS, JavaScript, React, Node.js, Bootstrap
Frameworks & Cloud: Spring Boot, Spring MVC, AWS (EC2, Lambda, S3, Auto Scaling)
Tools: Git/GitHub, MongoDB, MySQL, Jupyter, R Studio, Visual Studio

PROFESSIONAL EXPERIENCE

Full Stack Software Developer, Capgemini, India Jan 2023 – Jun 2023

- Reduced **API** response times by 20% through integration of **caching mechanisms (Redis)** and refining database queries with indexing and query refactoring.
- Increased system scalability by 25% by applying **Spring's Dependency Injection** and **Inversion of Control (IoC)** to decouple components, facilitating easier scaling and maintenance.
- **Minimized downtime by 30%** by deploying automated monitoring and alerting tools to address performance bottlenecks.

Research Assistant, JSPM College of Engineering, India Jul 2022 – Jan 2023

- Conducted in-depth research on churn prediction, analyzing a comprehensive dataset of **240,000 telecom customers** with **226 features** to identify critical churn indicators, facilitating data-driven decision-making for customer retention.
- Attained **94.19% accuracy** in churn prediction by improving **XGBoost** through hyperparameter tuning and leveraging advanced ML techniques (Logistic Regression, SVM, Random Forest).
- Authored and presented a research paper titled **"Churn Prediction in Telecom Industry"** at the *2023 International Conference for Advancement in Technology*, IEEE contributing to advancements in predictive analytics, machine learning.

Application Engineer, REG-ex Software Services, India May 2021 – Jun 2022

- Spearheaded development and maintenance of an essential software infrastructure for a major transportation client, using the **Spring Framework** to enhance system scalability by **30%**.
- Engineered seamless API integrations employing **Spring Integration** and **Spring Cloud Stream**, reducing data exchange latency by **20%** and enhancing real-time visibility across supply chain.
- Designed and developed **Spring Boot micro-services** for fleet management, enabling vehicle maintenance scheduling, telematics analysis, fuel optimization, and compliance tracking, reducing operational costs by **10%**.

Data Operations Engineer, Crystal Web Tech, India Nov 2020 – Apr 2021

- Constructed **ETL pipelines** with **Apache Spark** and **Hadoop**, processing 10GB of data daily across distributed clusters.
- Maximized image classification performance by **20%** (reducing processing time from 50ms to 40ms per image) through Spark job optimization and delivered **92% accuracy** by revamping Python-based data integration for **6-category** models.
- Built interactive dashboards and reports with **Tableau** and **Power BI**, transforming raw data into actionable insights enhancing stakeholder engagement by 35% and accelerated decision-making.

PROJECTS

Scalable Image Recognition System on AWS (AWS IaaS), Arizona State University Jan 2024 – May 2024

- Deployed a distributed image recognition system on **AWS IaaS**, utilizing **EC2, S3**, and **SQS** to process over 10,000 image requests and achieving **500 RPS** by fine-tuning **OpenCV** and **TensorFlow** pipelines with asynchronous processing.
- Leveraged AWS Auto Scaling to maximize resource efficiency, automatically scaling resources based on workload.

Video Face Recognition on AWS Lambda (AWS PaaS), Arizona State University Jan 2024 – Mar 2024

- Engineered a scalable serverless face recognition service on **AWS Lambda**, processing videos concurrently to attain **95% accuracy** with under **2-second latency** per frame by implementing transfer learning and expanded training datasets.
- Ensured cost-efficient scalability for **50 concurrent video uploads** by deploying S3 for decoupled video ingestion and storage from Lambda-based processing, facilitating efficient resource utilization.