

# Yashraj Bharambe

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## EDUCATION

### Master's in Computer Science

Arizona State University, Tempe, AZ

August 2023 - May 2025

GPA: 4.0/4.0

Relevant Coursework: Data Mining, Cloud Computing, Data Visualization, Statistical Learning Theory, Software Security.

### BTech in Information Technology

Savitribai Phule Pune University (University of Pune), Pune

July 2019 - June 2023

GPA: 3.9/4.0

Relevant Coursework: Data Structures, Database Management Systems, Computational Complexity and Algorithms.

## TECHNICAL SKILLS

**Languages:** Python, C++, Java, SQL, PL/SQL

**Web Technologies:** JavaScript, Angular, HTML, CSS, HTMX, React, Node.js, Bootstrap

**Frameworks & Cloud:** Spring Boot, Spring MVC, Spring Data JDBC, Spring Kafka, AWS (EC2, Lambda, S3, Auto Scaling)

**Databases:** Oracle SQL, BigQuery, MySQL, MongoDB, Redis

**Tools & DevOps:** Git, GitHub, Jira, Maven, CI/CD, Jupyter, R Studio, Visual Studio

## PROFESSIONAL EXPERIENCE

### Full Stack Software Developer, Capgemini, India

January 2023 – June 2023

- Refined **API** performance by 20% by introducing **Redis caching**, indexing **PostgreSQL** queries, and refactoring bottlenecked endpoints, resulting in 40% faster average response time.
- Increased system scalability by 25% by applying **Spring's Dependency Injection** and **Inversion of Control (IoC)** to decouple components, facilitating easier scaling and maintenance.

### Research Assistant, JSPM College of Engineering, India

July 2022 – January 2023

- Attained **94.19%** churn prediction accuracy by analyzing a **240K-customer** dataset with **226 features**, leveraging XGBoost (tuned) and ML models like **Logistic Regression**, **SVM**, **Random Forest** for actionable retention insights.
- 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 – June 2022

- Expanded system scalability by **30%** with **Spring Framework** for a major transportation client's software infrastructure.
- Engineered API integrations with Spring Integration and Spring Cloud Stream, cutting data exchange latency by 20%.
- Designed and developed **Spring Boot micro-services** for fleet management, enabling vehicle maintenance scheduling, telematics analysis, fuel optimization, and compliance tracking, lowering operational costs by **10%**.

### Data Operations Engineer, Crystal Web Tech, India

November 2020 – April 2021

- Built batch-based **ETL pipelines** using Apache Spark and Hadoop to process **10GB** of daily data across multi-node clusters, ensuring high throughput and fault tolerance.
- Improved image classification speed by **20% (50ms → 40ms)** by optimizing Spark jobs and refactoring a Python-based TensorFlow pipeline; achieved 92% accuracy across 6-category model.
- Designed **Tableau** and **Power BI** dashboards to visualize sales and churn KPIs (Key Performance Indicators), boosting stakeholder engagement by 35% and accelerating quarterly decision-making cycles.

## PROJECTS

### Graph-Based Transformers for Social Network Analysis

January 2025 – March 2025

- Implemented **graph-based transformer** models to classify social network users, securing **99.50%** accuracy in node classification and an F1-score of **95.91%** for imbalanced datasets (bots, influencers, normal users).
- Tackled class imbalance and scalability using **data augmentation** and **weighted loss**, boosting bot detection accuracy.

### Scalable Image and Video Recognition System on AWS

January 2024 – May 2024

- Deployed a scalable AWS system (**EC2**, **S3**, **SQS**, **Lambda**) for 10,000+ image requests (**500 RPS**) and 50 concurrent video uploads, achieving 95% accuracy (**less than 2s** latency) leveraging **OpenCV**, **TensorFlow**, and transfer learning.
- Optimized AWS resource efficiency and cost via Auto Scaling for **IaaS** and decoupled **S3** storage for serverless **PaaS**.

### Quiz Application using Spring Framework

September 2023 – December 2023

- Developed a Spring Boot quiz app with **RESTful APIs** and **Spring Security**, improving user experience by 30%.
- Enhanced project efficiency by employing **Maven** to shorten deployment time by 30% and attain a 250% improvement in data retrieval speed, with **95% test coverage** for key features like quiz creation and scoring.