Yashraj Bharambe

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EDUCATION

Master's in Computer Science — Expected May 2025
Arizona State University, Tempe, AZ — GPA: 4.0
BTech in Information Technology — June 2023
Savitribai Phule Pune University (University of Pune), Pune — GPA: 3.9

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 Engineer Intern, Capgemini, India — January 2023 – May 2023

- Reduced API response times by 20% through the integration of **caching mechanisms (Redis)** and refining database queries with indexing and query refactoring.
- Increased system scalability by 25% by utilizing **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 identify and address performance bottlenecks.
  Tech Stack: Spring Boot, Spring MVC, RESTful APIs, Java, MySQL, Git.

Data Science Intern, REG-ex Software Services, India — July 2021 – October 2021

- **Boosted data processing efficiency by 20%** by parallelizing data preprocessing tasks with Python's multiprocessing library and refining algorithms for faster execution.
- Attained 95% accuracy in a CNN-based classification system by adjusting hyperparameters, expanding the dataset to reduce overfitting, and employing transfer learning with a pre-trained **ResNet model.**
- Partnered with diverse teams to integrate machine learning solutions into production environments.
  Tech Stack: Python, TensorFlow, Keras, Pandas, NumPy, Scikit-learn, Jupyter.

PROJECTS

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

- Developed a distributed image recognition system leveraging **AWS EC2** for compute, **S3** for storage, and **SQS** for message queuing, allowing the system to process over 10,000 image requests.
- Optimized resource utilization by deploying **AWS Auto Scaling**, ensuring efficient allocation based on workload demand.
- Attained **500 RPS (Requests Per Second)** by refining image processing pipelines with **OpenCV** and **TensorFlow**, and utilizing asynchronous processing to manage concurrent requests effectively.
  Tech Stack: AWS EC2, S3, SQS, Auto Scaling, Python, OpenCV, TensorFlow.

Video Face Recognition using AWS Lambda (AWS PaaS), Arizona State University — January 2024 – March 2024

- Created a scalable face recognition service by processing videos in parallel with **AWS Lambda**, achieving **95% accuracy** with a latency of under 2 seconds per frame.
- Supported **50 concurrent video uploads** by separating video ingestion and processing using S3 for storage and Lambda for serverless compute, ensuring scalability and cost-efficiency.
- Improved accuracy by refining the face recognition model through transfer learning and expanding the training dataset.
  Tech Stack: AWS Lambda, Python, OpenCV, TensorFlow, AWS S3.

Quiz Application using Spring Framework, Personal Project — January 2023 – April 2023

- Designed and developed a full-stack quiz application with **Spring Boot** for the backend and **React** for the frontend, allowing users to create, take, and review quizzes.
- Integrated **secure authentication** using **JSON Web Tokens (JWT)** and streamlined frontend-backend communication through well-structured RESTful APIs.
- Enhanced **data retrieval performance by 250%** by refining database queries and incorporating Redis for caching frequently accessed data.
  Tech Stack: Spring Boot, Java, React, MySQL, Maven, RESTful APIs.

PUBLICATIONS

"Churn Prediction in Telecom Industry", *2023 International Conference for Advancement in Technology (ICONAT),* IEEE.

KEY STRENGTHS

- Proficient in building scalable enterprise applications with Java, Spring Boot, React, and Node.js.
- Skilled in cloud-based solutions (AWS, SaaS, PaaS) and optimizing large-scale distributed systems.
- Strong collaboration skills with cross-disciplinary teams.