Mandar Dhamale

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Summary

Software Engineer with **3 years** of experience in architecting and scaling distributed, enterprise-level systems. Proven track record of improving system performance and reliability while delivering robust features in an Agile environment.

Education

University of South Florida — Florida, United States

Master of Science (MS) in Computer Science — *August 2025 – Expected May 2027*

- **Relevant Coursework:** CUDA Programming, Machine Learning, Distributed Systems, Cloud Computing

Savitribai Phule Pune University — Maharashtra, India

Bachelor of Engineering (BE) in Computer Science; GPA: 3.5 — *August 2018 – May 2022*

- **Relevant Coursework:** Data Structures & Algorithms, Operating Systems, Database Management Systems

Experience

Ivalua Inc. — October 2022 – August 2025

Software Development Engineer — *Pune, India*

- Engineered and scaled core backend microservices using Java Spring Boot, accommodating a 23% expansion of the active user base and processing over 100,000 daily transactions.
- Designed RESTful API integrations that automated supplier onboarding, reducing average processing time from 2 days to under 4 hours and saving an estimated 20 manual hours per week.
- Optimized complex SQL queries and database schemas to slash average execution time by 16%, enhancing analytics dashboard performance for faster, data-driven decision-making.
- Improved the performance of the supplier dashboard by optimizing API payloads and implementing front-end caching, which decreased average page load time by 1.2s.
- Shipped high-quality code for 5+ major annual releases as a key member of an Agile/Scrum team, guiding 2 intern engineers from initial onboarding to becoming productive contributors on the team.

University of South Florida — September 2025 – Present

Research Assistant — *Tampa, Florida*

- Architected various multi-modal machine/deep learning systems that use insights from medical imaging (MRI) and EHRs for complex diagnostic and prognostic tasks, such as identifying medical abnormalities and predicting patient outcomes.
- Achieved a 15% improvement in model accuracy and generalization over baseline by applying advanced data augmentation techniques and systematic hyperparameter tuning.
- Collaborated on research by surveying and reproducing models from 10+ academic papers to establish performance benchmarks and validate experimental findings.

Projects

PhotoSync – Self-Hosted Photo Backup Solution *(view)* | *Spring Boot, Kotlin, Android SDK, Retrofit, REST APIs, MySQL*

- Created a full-stack photo backup solution with an Android client (Coroutines) and a self-hosted Spring Boot server, providing a private alternative to cloud services.
- Developed a resilient background sync service with Android's WorkManager, ensuring reliable, battery-efficient photo backups that could complete automatically.

PhotoVault API with JWT Authentication *(view)* | *Java, Spring Boot, Spring Security, JWT, OAuth, MySQL*

- Developed a secure, RESTful API in Java and Spring Boot to manage photo assets, featuring comprehensive CRUD operations and server-side validation.
- Engineered a stateless authentication system using Spring Security and JWT, implementing role-based access control and token refresh logic to secure all API endpoints.

Brain Tumor Detection (CNN) *(view)* | *Python, TensorFlow, Keras, Flask, OpenCV, scikit-learn, HTML, CSS, Bootstrap*

- Trained an end-to-end deep learning solution to classify brain tumors from MRI scans, achieving 97.83% accuracy on a dataset of over 2,800 images.
- Built a lightweight Flask web application to serve the model, creating a user-friendly interface for real-time tumor diagnosis.

Loan Approval Risk *(view)* | *Python, scikit-learn, Pandas, Jupyter*

- Conducted Exploratory Data Analysis (EDA) to select key predictors and used K-Means clustering to segment applicants into risk profiles.
- Evaluated five ML models (including Logistic Regression, Random Forest, and AdaBoost), achieving 82% prediction accuracy with the top-performing model.

Technical Skills

Languages: Java, Python, JavaScript, C#, C/C++, SQL | **Frameworks/Libraries**: Spring Boot, Spring Security, Hibernate, React.js | **Databases**: MySQL, MongoDB, Elasticsearch | **Cloud & DevOps**: AWS (EC2), Docker, Kubernetes, Kafka, Linux, Git, Postman | **Machine Learning**: TensorFlow, PyTorch, Keras, Pandas, NumPy