

Mandar Dhamale

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EDUCATION

University of South Florida

Master of Science (MS) in Computer Science

Florida, United States

Aug. 2025 – Expected May 2027

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

Savitribai Phule Pune University

Bachelor of Engineering (BE) in Computer Science; GPA: 3.5

Maharashtra, India

Aug. 2018 – May 2022

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

EXPERIENCE

Ivalua Inc.

Software Development Engineer

Oct. 2022 – Aug. 2025

Pune, India

- Developed and scaled core backend modules for a procurement SaaS platform, enhancing system capacity to support a growing number of enterprise clients and handle increased transactional volume.
- Architected and implemented RESTful API integrations with key third-party services, automating critical supplier onboarding workflows and unlocking new data-driven features for users.
- Optimized SQL database schemas and queries using SQL Profiler, reducing average query execution time by 22% and accelerating data retrieval for procurement analytics.
- Proactively identified and resolved system bottlenecks using Datadog for real-time performance monitoring, which significantly improved application stability and minimized service disruptions.
- Contributed to an Agile/Scrum development team using Git; delivered features in 5+ major releases per year, boosting code quality via rigorous code reviews and cutting deployment failures by 13%.

University of South Florida

Research Assistant

Sept. 2025 – Present

Tampa, Florida

- Architecting and training advanced neural networks (CNNs, Transformers) to extract critical insights from medical imaging and clinical data for predictive modeling.
- Improving model performance and generalization by implementing sophisticated data preprocessing, augmentation, and evaluation metrics for healthcare AI applications.
- Driving research direction by surveying state-of-the-art literature and reproducing published models to ensure experimental robustness and validity.

PROJECTS

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

- Engineered a full-stack photo backup solution with an Android client (Kotlin, Coroutines) and a self-hosted Spring Boot server, providing a private alternative to cloud services.
- Implemented background sync using WorkManager and a duplicate detection algorithm to optimize storage.

Spring Boot Albums API with JWT Authentication | Java, Spring Boot, Spring Security, JWT, OAuth, MySQL

- Developed a secure RESTful API for photo album management with CRUD operations and robust validation.
- Integrated Spring Security with JWT for stateless, owner-based authorization and implemented token refresh/expiration logic for secure session management.

Brain Tumor Detection (CNN) | Python, TensorFlow, Keras, Flask, OpenCV, scikit-learn

- Developed and trained a CNN model in TensorFlow/Keras, achieving 97.83% accuracy on 2,800+ MRI scans.
- Deployed via Flask web app for real-time tumor diagnosis.
- Preprocessed with OpenCV/Pillow; compared against SVM/KNN baselines.

Loan Approval Prediction | Python, scikit-learn, Pandas, Jupyter

- Trained ML models (Logistic Regression, KNN, Decision Tree, Random Forest, AdaBoost) achieving ~82% accuracy.
- Performed EDA, statistical tests (ANOVA, Chi-Square, Correlation) to identify best predictors.
- Clustered applicants to segment loan profiles.

TECHNICAL SKILLS

Core Strengths: Java, Python, Spring Boot, SQL, REST APIs, JavaScript, React.js, Microservices, System Design, Git

Machine Learning: TensorFlow, Keras, Pandas, NumPy | **Cloud & DevOps:** Docker, AWS (EC2), Kubernetes, Kafka, Linux

Familiar With: C#, ASP.NET, Kotlin, HTML, CSS, C/C++, MongoDB, Elasticsearch, Jenkins