

# Mandar Dhamale

Software Engineer

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## Education

### University of South Florida

Master of Science (MS) in Computer Science; **GPA: 3.7**

Florida, United States

August 2025 – 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

August 2018 – May 2022

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

## Experience

### University of South Florida

September 2025 – Present

Tampa, Florida

Research Assistant

- Architected multi-modal deep learning systems integrating MRI and EHR data for complex diagnostic tasks, achieving 97% accuracy in identifying 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.

### Ivalua Inc.

October 2022 – August 2025

Pune, India

Software Development Engineer

- 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.

### P.E.S Modern College of Engineering

March 2019 – May 2019

Pune, India

Web Developer

- Pioneered and deployed a comprehensive departmental website using HTML, CSS, and JavaScript to centralize student resources, streamlining information accessibility for a student body of over 100 individuals.
- Collaborated with faculty stakeholders to develop a digital portal for course material distribution, successfully decreasing departmental paper consumption by 40%.

## Projects

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

- Created a private full-stack photo backup solution using Android (Coroutines) and a self-hosted Spring Boot server to eliminate reliance on public cloud providers, successfully handling over 10+ GB of media with zero data leakage.
- Developed a resilient background sync mechanism using Android's WorkManager to handle intermittent network conditions, ensuring 99% upload reliability while reducing battery consumption by 5% during large file transfers.

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

- Developed a robust RESTful API using Java and Spring Boot to manage complex asset data lifecycles, enabling comprehensive CRUD operations and server-side validation for over 10,000+ media items.
- Engineered a stateless authentication architecture using Spring Security and JWT to enforce strict role-based access control, successfully securing 12+ API endpoints and eliminating session management overhead.

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

- Trained an end-to-end deep learning solution to automate the classification of brain tumors, processing a dataset of over 2,800 MRI scans to achieve a validation accuracy of 97.83%.
- Built a lightweight Flask web application to deploy the diagnostic model, creating a user-friendly interface that enables real-time tumor diagnosis with inference speeds under 200ms.

## Technical Skills

**Languages:** Java, Python, JavaScript, C#, C/C++, CUDA, SQL

**Frameworks/Libraries:** Spring Boot, Spring Security, Hibernate, React.js, TensorFlow, PyTorch, Keras, Pandas, NumPy

**Databases:** SQL (MySQL, PostgreSQL, Microsoft SQL, H2), NoSQL (MongoDB, Elasticsearch)

**Cloud & DevOps:** AWS (EC2), Docker, Kubernetes, Kafka, Linux, UNIX, Git, Postman, GRPC, CI/CD pipeline