

## PROFILE

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I am an AI/ML researcher with an M.S. in Computer Science from University of Massachusetts Boston, specializing in the design and optimization of deep learning architectures for medical imaging and advanced machine learning applications. I have a strong background in artificial intelligence, computer graphics, and data visualization.

## PUBLICATIONS

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My research focuses on leveraging deep learning for medical image analysis and diagnostic support.

- **OMAMA-DB: The Oregon–Massachusetts Mammography Database**  
*Under submission to Journal of Medical Imaging (JMI)*
- **RM-DenseNet: An Enhanced DenseNet Framework with Residual Model for Breast Cancer Classification Using Mammographic Images** [[InCACCT 2024](#) – [Link](#)]
- **Diagnosis and Classification of Breast Cancer using Data Visualization and Deep Learning** [[ICRISST 2024](#) – [Link](#)]

## EXPERIENCE

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- **Teaching Assistant – CS460, CS617, CS666**, University of Massachusetts Boston [[Lectures](#)] Sep 2025 – Present
  - Led course staff and coordinated grading across three advanced computer science courses.
  - Delivered lectures to undergraduate, graduate, and Ph.D. students.
  - Taught computer graphics, data visualization, and biomedical signal and image processing concepts.
  - Mentored students on research-driven and applied technical projects.
- **IMPACT Trainer**, Venture Development Center, University of Massachusetts Boston [[Lectures](#)] Jan 2026 – Present
  - Led hands-on technical workshops teaching Ubuntu bootable USB creation and Linux live environments.
  - Guided students in Miniconda environment setup and local Jupyter workflow configuration.
  - Strengthened students' system-level understanding beyond cloud-only workflows.
- **Co-Founder & AIML Researcher**, The AI Fantastic Team [[Community Spotlight](#)] May 2025 – Present
  - Co-led student research initiatives in AI and machine learning, contributing to experimental design and execution.
  - Collaborated with peers from CS, business, and marketing to explore AI's social and technical impact.
  - Helped grow the team's digital presence and community outreach through content sharing and events.
- **Machine Psychology Fellow**, University of Massachusetts Boston [[Lab](#)] [[GitHub](#)] Jan 2025 – Present
  - Contributed to OMAMA-DB, a 231,080-image (2D/3D) medical imaging dataset.
  - Evaluated DeepSight via image-level vs. study-level prediction analysis across the full dataset.
  - Built automated inference pipelines to standardize scoring and improve reproducibility.
  - Developed CNN and U-Net models for multi-view DICOM segmentation and classification.
- **Software Engineering Intern**, VIVO Services Jun 2023 – Jun 2024
  - Improved user experience by enhancing the Geo Attendance UI using HTML/CSS, resulting in smoother daily usage.
  - Contributed to key front-end modules across multiple projects, ensuring timely and consistent feature delivery.
  - Maintained a strong professional presence, earning team trust through reliable and high-quality work output.
- **AI/ML Internships (Remote)** May 2022 – Jan 2024
  - Built ML/DL models across roles at SYNC Interns, CodersCave, CodeClause, Bharat Intern, and Eduversity.
  - Projects included gender/age detection, COVID diagnosis, Titanic survival prediction, and NLP pipelines.
  - Gained expertise in Python, PyTorch, TensorFlow, data preprocessing, and evaluation metrics.

## ACADEMIC PROJECTS

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- **VERITAS – AI Image Forensics System** [[GitHub](#)] [[Live Demo](#)] Jan 2026 – Feb 2026
  - Developed a dual-model AI system for real vs. AI-generated image detection.
  - Trained a CNN on 60,000 CIFAKE images, achieving 93% validation accuracy.
  - Implemented an EfficientNetB0 transfer learning model for high-resolution detection.
  - Deployed a live Gradio application on Hugging Face Spaces for real-time inference.

- **Autofolio (AI Portfolio Generator)** [GitHub] [Slides] Oct 2025 – Nov 2025
  - Built an AI-powered portfolio generator using React, Node.js, and Google Gemini AI.
  - Generates responsive portfolio websites with HTML, CSS, JS, animations, and modern UI.
  - Developed REST APIs for spec generation, asset creation, live preview, and ZIP export.
- **Image Colorization using Conditional GANs** [GitHub] [Slides] [Paper] Feb 2025 – May 2025
  - Restored grayscale images by developing a GAN-based pipeline using ResNet18, Dynamic UNet, and PatchGAN.
  - Delivered production-ready documentation, visuals, and a web demo for user testing.
  - Demonstrated effectiveness of generative modeling for creative restoration tasks in image processing.
- **Knowledge Distillation** [GitHub] [Website] [Slides] [Poster] Apr 2025 – May 2025
  - Achieved over 60% accuracy using compact CNNs via knowledge distillation.
  - Conducted 13 controlled experiments using Google, Bing, and SD data to test generalizability.
  - Published findings with supporting UI, poster, and code repository for open access.
- **AI Model to Predict Alzheimer's Diagnosis** [GitHub] [Report] Aug 2024 – Dec 2024
  - Achieved 95% test accuracy by training neural networks on Kaggle medical data using TensorFlow and PyTorch.
  - Preprocessed, encoded, and normalized input features and labels for model stability.
  - Demonstrated the effectiveness of ML for early-stage Alzheimer's screening in real-world settings.

## EDUCATION

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- University of Massachusetts Boston** Expected May 2026  
M.S. in Computer Science — CGPA: 3.9  
Relevant Courses: AI, Computer Vision, Algorithms, AI For All
- SRM Institute of Science and Technology** Sep 2020 – Jun 2024  
B.Tech in CSE (AI/ML Specialization) — CGPA: 3.46  
Courses: DSA, OS, CO, Deep Learning, App Dev

## CERTIFICATIONS

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- **AWS Academy** – Cloud Architecting, Cloud Foundations, Cloud Security Foundations (Jun–Nov 2023)
- **Coursera** – Advanced Learning Algorithms, Python for Data Science, Supervised ML: Regression and Classification (Mar 2023)
- **MathWorks** – Deep Learning, Image Processing, MATLAB Onramps (Dec 2022)
- **Skill-Lync** – Microsoft Azure AI Fundamentals, Web Development with ReactJS (Jan–Mar 2023)
- **University of Washington** – Machine Learning Foundations: A Case Study Approach (May 2023)
- **IBM** – Introduction to DevOps (Apr 2023)
- **Great Learning** – Computer Vision Essentials, MySQL Basics (Mar–Apr 2022)
- **Aspiring Minds** – Data Processing Specialist (Mar 2023)
- **HackerRank** – Python (Basic), SQL (Intermediate) (Apr 2023)
- **Internshala** – Web Development Internship (Jun 2022)

## SKILLS

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**Languages & Web:** Python, C, C++, Java, JavaScript, HTML, CSS, PHP, SQL, MySQL, Flask  
**ML/AI:** TensorFlow, PyTorch, Scikit-learn, Transformers (Hugging Face), YOLO, spaCy, OpenAI Gym, Stable Baselines3  
**Libraries:** Pandas, NumPy, Matplotlib, Seaborn, TensorFlow Object Detection API  
**Data & Visualization:** Chart.js, Tableau, Excel, Jupyter, Google Colab  
**Tools:** Git, GitHub, PyCharm, Visual Studio, IntelliJ IDEA, Eclipse, Teams  
**Deployment:** TensorFlow Serving, Flask/FastAPI for ML APIs