

## PROFILE

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I'm an AI researcher with an M.S. in Computer Science from UMass Boston, with a strong interest in deep learning and computer vision. I've worked on projects like cancer detection and image segmentation, using neural networks to solve real-world healthcare problems. I enjoy turning complex research into practical tools that make a real difference—whether it's improving diagnostics, streamlining medical workflows, or helping teams make smarter decisions.

## PUBLICATIONS

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My research focuses on leveraging deep learning for medical image analysis, specifically for early breast cancer detection and diagnostic support.

- **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: Computer Graphics**, University of Massachusetts Boston [[Course](#)] Sep 2025 – Present
  - Lead the course staff; coordinate grading workflows, announcements, and assignment logistics.
  - Teach and support students in computer graphics and web-based 3D visualization.
  - Share expertise in WebGL, WebGPU, Three.js, and XTK to build interactive graphics experiences.
  - Delivered a lecture on WebGPU fundamentals (adapter/device, WGSL shaders, render pipelines).
  - Design instructional materials and visual demos; hold office hours and provide Discord support.
- **Co-Founder & AI 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**, UMass Boston [[GitHub](#)] [[Report](#)] Jan 2025 – Present
  - Improved diagnostic consistency in breast cancer scoring by automating DeepSight inference pipeline.
  - Built CNN and U-Net models for segmentation and classification of multi-view DICOM inputs.
  - Enabled reproducible research by modularizing pipelines and standardizing scoring formats.
- **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.
- **Cloud Intern**, AICTE (Remote) May 2023 – Jul 2023
  - Completed 10-week AWS Cloud internship, focusing on infrastructure, security, and scalable app deployment.
  - Developed cloud-native prototypes using EC2, S3, IAM, and CloudFormation for hands-on learning.
- **Web Development Intern**, Internshala (Remote) Oct 2022 – Nov 2022
  - Created responsive websites with HTML, CSS, Bootstrap, JS, and PHP during 8-week intensive training.
  - Earned 100% final score, demonstrating strong front-end skills and real-world UI development.

## ACADEMIC PROJECTS

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- **Knowledge Distillation** [[GitHub](#)] [[Website](#)] [[Slides](#)] [[Poster](#)] Apr 2025 – May 2025
  - Achieved over 60% accuracy using compact CNNs by distilling knowledge from larger models across real and synthetic datasets.

- 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.
- **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.
- **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.
- **Movie Verse Platform** Aug 2024 – Dec 2024
  - Improved user experience by building a genre-based movie filtering and review site with Flask and Chart.js.
  - Designed a full-stack architecture with SQLite backend and real-time data visualization dashboard.
  - Enabled personalized content exploration through interactive filtering and feedback loops.
- **AI News Chatbot** Jul 2024 – Aug 2024
  - Enhanced user engagement by delivering real-time news recommendations via NewsAPI and NLTK.
  - Implemented keyword analysis and country-based routing to tailor content dynamically.
  - Visualized topic distributions using word frequency and term weighting techniques.

## EDUCATION

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

## 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