

Sangram Dighe

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EDUCATION

Syracuse University - College of Engineering & Computer Science, Syracuse, NY
Master of Science, **Computer Science**

August 2024 – May 2026

Coursework: Design & Analysis of Algorithm, Artificial Neural Network, Machine Learning and Algorithms, Natural Language Processing, Applied Agentic AI systems, Social Media & Data Mining

GPA: 3.67

Savitribai Phule Pune University - AISSMS IOIT, Pune, India
Bachelor of Engineering, **Artificial Intelligence and Data Science**

January 2021 – June 2024

CGPA: 8.42/10

EXPERIENCE

Software Engineer, CompuSoul Computer Solutions – North Carolina

June 2026 – Present

- Building and testing full-stack web and mobile features on **Supabase** and **PostgreSQL** across multiple client projects, identifying and resolving bugs and vulnerabilities before production release.
- Developed a **telemedicine** appointment platform (**PHP Laravel, Flutter**) featuring **HIPAA-compliant** MFA, encryption, and secure **role-based** panels (Admin, Doctor, Receptionist, Patient).

Software Engineer Intern, iConsult Collaborative – Syracuse University

January 2026 – May 2026

- Built an 8-step automated pipeline converting PDFs into **WCAG 2.2** and **ADA** compliant documents for Our Ability Inc. (NYC), using Adobe's AutoTag and Accessibility Checker APIs with **AWS Lambda** and **Bedrock LLMs**, achieving **97% +** tagging accuracy and giving screen reader users reliable access to previously inaccessible documents.
- Connected the full pipeline to a **Next.js** frontend for live progress tracking, processing 100 PDFs at 1-2 minutes each, and worked directly with client stakeholders to translate accessibility requirements into technical deliverables.

AR/VR Developer, Mayur Hajare Consultancy – Pune, India

March 2024 – August 2024

- Built a no-code VR platform using **Three.js**, **WebXR**, and **React** enabling real estate businesses to design and deploy 3D panorama virtual tours, helping secure **5+ new clients** and **1.5x** increase in customer inquiries.
- Developed a no-code AR platform using 8th Wall supporting image-based, surface-tracking, and real-time 3D object tracking experiences, with an integrated dashboard for training and testing 3D models in real-time.

PROJECTS

EquityTraderX - Multi-Agent Trading System (CrewAI + LangGraph)

January 2026 – May 2026

- Designed two-layer multi-agent architecture:** Layer 1 is a 5-agent CrewAI crew that programmatically generates Layer 2 (53 files, 66 tests); Layer 2 is an 11-node LangGraph with parallel analyst fan-out, hybrid Python-LLM risk enforcement, and a Reflection Agent for groundedness scoring.
- Ran 90 live trading cycles** across 3 LLM configurations; best run delivered **21.17% return**, **Sharpe 19.418**, **Jensen alpha 0.0573**, validating reliability of the agentic orchestration pipeline.

Multi-Style Text Generation for Enhanced Text Transformation

August 2025 – December 2025

- Built a **single controllable style-transfer model** that rewrites any input into **five styles** (Professional, Casual, Polite, Social & Emojify) using an instruction prompt format ("**convert to {style}: {text}**"), enabling consistent multi-style generation without training separate models.
- Created a **synthetic multi-style parallel dataset** (13,176 train / 1,464 val / 2,500 test) in JSONL and fine-tuned **FLAN-T5-base** with a reproducible pipeline (HF Transformers on **University GPU cluster HTCondor**), achieving strong content preservation (**ROUGE – 1 $\approx$ 0.736**, **BLEU $\approx$ 0.538**) and a UI (React + Flask) for real-time demo.

Hybrid Capsule Networks & Vision Transformers for CIFAR-100 Image Classification

January 2025 – April 2025

- Built and compared **ResNet-34**, **ViT-Tiny**, and **CapsNet** (Sabour et al.) on **CIFAR-100** (50K train / 10K test) in **PyTorch/CUDA**, using consistent training/augmentation to ensure fair benchmarking.
- Proposed a **Capsule + ViT hybrid (CapsViT)** using cross-attention (capsules query transformer tokens) and achieved **62.6% top-1 accuracy**, beating **ResNet-34/CapsNet (58.3%)** and **ViT-Tiny (51.3%)**, with lower routing cost.

TECHNICAL SKILLS

- Languages:** Python, SQL, JavaScript, Java, C/C++, R
- AI/ML & Deep Learning:** PyTorch, TensorFlow, HF Transformers, scikit-learn, NumPy, Pandas, NLTK, OpenCV
- Agentic AI & LLMs:** LangChain, LangGraph, CrewAI, AutoGen, OpenAI Agents SDK, Model Context Protocol (MCP), Vector Databases (FAISS, Chroma)
- Backend & Frameworks:** FastAPI, Flask, Django, Streamlit, REST APIs
- Databases & Cloud:** PostgreSQL, MySQL, MongoDB, Firebase, AWS (EC2, S3, IAM), Docker, Git, Linux, Spark