Manasvini Kandikonda

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ABOUT

Third-year B.Tech student in **AI & Data Science at Amrita Vishwa Vidyapeetham**, focused on the intersection of **computer science, mathematics, and economics**. Build data driven financial and technical projects end to end, with interests spanning **quantitative modelling, machine learning, and software engineering**. Former Vice Chair of IEEE Women in Engineering, with two published research papers and experience as Karnataka State basketball captain.

EDUCATION

B.Tech in Artificial Intelligence and Data Science (Pursuing) *2024 – 2028*
Amrita Vishwa Vidyapeetham, Bengaluru — CGPA: 8.65 (As of Semester 4)

PUBLICATIONS

- The Effects and Classification of Psychoactive Substances: A Machine Learning Approach. CSITSS 2025 — Paper
- Contour Based Tracking vs. Hough Transform Based Tracking: An RC Car Experiment. WCONF 2025 — Paper

INTERNSHIP EXPERIENCE

Intern – 314e Corporation *December 2025 – January 2026*

- Built a Retrieval-Augmented Generation (RAG) system for querying large-scale patient medical records by combining SQL-based metadata retrieval, semantic chunking, transformer embeddings, and vector search.
- Implemented source-page highlighting for explainability while reducing hallucinations in generated responses and collaborating on production-oriented software workflows.

PROJECTS

Finlitter – Personal Financial Management Platform — GitHub *January 2026 - Ongoing*

- Addressed the gap between **short-form financial content and practical financial understanding** by building a platform that turns financial concepts into personalized, actionable decisions.
- Developing a **unit-tested financial toolkit** for SIP, EMI, compound-interest, and FD calculations, alongside a **1,000-path Monte Carlo investment simulator** evaluating equity, debt, and gold allocations across P10/P50/P90 portfolio outcomes.
- Engineered the security layer with **Argon2id, JWT authentication with refresh-token rotation and revocation, rate-limited login, and AES-256-GCM encryption with per-user HKDF-derived keys** to protect sensitive financial data.

Optimized Synthesis of Gold Nanoparticle Synthesis for Cancer Treatment — GitHub

- Model predictions for gold nanoparticle synthesis said whether a batch would work but not what to change, and generated advice cannot be trusted in a lab.
- Built a rule engine that scores each predicted property (size, zeta potential, drug loading, targeting, cytotoxicity) against suitability ranges and maps every out-of-range deviation to a chemist-approved fix, keyed by synthesis method, property and direction.
- Each recommendation is fixed in advance with a one-line mechanistic justification, so none of it is generated text. Runs on top of a Keras multi-output model. Research manuscript in preparation for journal submission.

Visual-First Residual Correction for 2D-to-3D Facial Reconstruction (DECA) — GitHub

- DECA's pretrained 2D-to-3D face reconstruction was off on expression, jaw-pose and camera parameters, and the training data had no landmark labels to correct it.
- Trained a 3-layer residual MLP on top of the frozen backbone to correct those parameters, generated the missing labels with a FAN landmark pipeline, and added hard-case-weighted sampling after tracing a data-loading bug that collapsed expression-bucket sampling. The corrected model runs in real time through four webcam inference pipelines.

SKILLS

Programming Languages: Python, Java, Go, C, C++
Backend & Data: SQL, REST APIs, FastAPI, Node.js
Software Engineering: Object-Oriented Programming, Git, SDLC, Unit and Integration Testing
AI & ML: Machine Learning, Deep Learning, Computer Vision, Natural Language Processing
Quantitative and Finance: Econometrics, Financial Engineering, Graph Theory
DevOps, Web & Tools: Docker, Linux, HTML, CSS, React, JavaScript

POSITIONS OF RESPONSIBILITY

Vice Chair — IEEE Women in Engineering (WIE) *July 2025 – August 2026*

- Organized technical talks featuring professionals from Oracle, Schneider Electric, JPMC and IAS Officers.
- Led and coordinated over six technical and outreach events with 1000+ participants during the 2025 – 2026 academic year.

Captain — CISCE Karnataka Basketball Team *2019-2020*

- Led a State Basketball Team to a Gold medal at the Sub Junior National Basketball tournament.

HACKATHONS

- **Finalist** at the Novo Nordisk Hackathon – (2025-2026)
- **Runners-Up** at an electronics-based hackathon – (2025)

EXTRACURRICULARS

- Two-time Karnataka State Basketball player; active member of the University Basketball Team (2024 – Present)
- Outreach: Developed a mental health application under a UN initiative and mentored school students in app development.