

Jeevesh Nandan Upadhyay

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SUMMARY

Computer Science & Business Analytics graduate with expertise in AI/ML, speech processing, predictive modelling, and full-stack development. Currently serving as Assistant Professor at Sanjivani University, delivering courses in Deep Learning, Machine Learning, and OOP in Java. Built patented real-world solutions — EmotiGen (Ref: CC2526PU172) and ECONET (Ref: CC2425PU224) — achieving up to 95% accuracy in production systems. Passionate about scalable, data-driven intelligent systems.

WORK EXPERIENCE

Assistant Professor — Computer Science

Department of Integrated MTech(CSE)

Sanjivani University

June 2025 – Present

- Teaching core undergraduate courses: **Deep Learning, Machine Learning, and Object-Oriented Programming in Java**.
- Developed **IMBIBE** — a knowledge-first social platform built on React Native + Node.js + PostgreSQL that gamifies learning by replacing passive social media scrolling with structured, rewarding content consumption.
- Built **EVEFY** — a B2C event services marketplace enabling customers to discover, compare, and book verified event managers with end-to-end Stripe Connect payment integration.
- Currently developing an **ML/DL-based Business Recommendation System** that profiles businesses and generates data-driven strategic recommendations — project in active development.
- Mentoring students on AI/ML projects and guiding application of industry-relevant tools and frameworks.

EDUCATION

Vellore Institute of Technology (VIT)

Integrated MTech (Dual Degree) — Computer Science Engineering, Specialization in Business Analytics

Chennai, Tamil Nadu

2020 – 2025

- CGPA: **8.12 / 10**

TECHNICAL SKILLS

Languages: Python, R, Java, JavaScript, TypeScript

AI / ML: Machine Learning, Deep Learning, Transfer Learning, Computer Vision, Speech Processing, NLP, RAG, LLMs, Recommender Systems, Predictive Modelling, Genetic Algorithms

Web & Full-Stack: React.js, Next.js, React Native, Node.js, Express.js, RESTful APIs, JWT, Zod, Drizzle ORM

Databases: PostgreSQL, MySQL, Redis, Hadoop

Cloud & DevOps: AWS (S3, ECS, CloudFront), GitLab CI/CD, Docker, Apache Spark, Kafka, Flink

Tools: Tableau, Power BI, Bright Data, Git, Turborepo, Elasticsearch, Stripe Connect

Other: Generative AI, Cryptography, Quantitative Analysis, Big Data, Socket.io

PROJECTS

IMBIBE | React Native · Node.js · Express · TypeScript · PostgreSQL · Drizzle ORM · Redis · Docker

Nov 2025 – Present

- Built a **knowledge-first social platform** designed to replace passive dopamine-driven scrolling with structured, rewarding learning — trading social media habits for intellectual growth.
- Architected a **Monorepo (npm workspaces + ESM)** with Node.js + Express + TypeScript backend (tsx dev / tsc build), PostgreSQL + Drizzle ORM for the data layer, and Docker Compose orchestrating Postgres and Redis containers for local infrastructure.
- Implemented Auth & Security with **JWT, bcrypt, helmet**, and express-rate-limit; enforced strict schema validation via **Zod** and structured logging with **Pino**.
- Planned mobile client in **React Native + TypeScript** with Zustand for state management and TanStack Query for server-state synchronisation.

EVEFY | Next.js · React Native · Node.js · TypeScript · PostgreSQL · Stripe Connect · Redis · Elasticsearch · AWS

Jan 2026 – Present

- Architecting a **B2C event services marketplace** enabling customers to discover, compare, and book verified event managers — covering end-to-end flow from profile browsing to secure checkout.

- Integrated **Stripe Connect** for split-payment processing between platform and vendors, handling escrow, automated payouts, refund workflows, and vendor KYC verification.
- Implemented **Elasticsearch** for faceted search across event managers by location, category, availability, rating, and price — delivering sub-100ms discovery at scale.
- Built **Redis-backed availability locking** to eliminate double-booking race conditions; Socket.io for real-time chat, live booking status updates, and push notifications.
- Designed a **Turborepo monorepo** with separate API services for customers, vendors, and admin; deployed on AWS ECS with S3 + CloudFront CDN for vendor portfolio media.

ECONET | *React.js · Node.js · Express.js · PostgreSQL · AWS S3 · GitLab CI/CD* | Patent: CC2425PU224 / PS00019487

- Built a full-stack eco-friendly marketplace integrating thrift and recycled stores with AI-based waste fraud detection, verifying predicted waste type and weight against user input.
- Implemented JWT authentication, RESTful APIs, and middleware; deployed CI/CD pipeline via GitLab improving system reliability and release velocity. Patentability Search Report filed.

EmotiGen | *Python · Genetic Algorithms · TESS · CREMA-D · RAVDESS* | Patent: CC2526PU172 2023

- Engineered an emotion-aware voice-to-text platform using genetic algorithms on TESS, CREMA-D, and RAVDESS datasets, achieving **95% emotion recognition accuracy**.
- Deployed use-case modules for formal letter generation and classroom note-taking with cloud integration and email automation, optimising text generation latency end-to-end.

ATRIA-CT | *Python · U-Net · EfficientNetB0* | Abdominal Trauma Recognition & Intelligent Analysis | Solo 2023

- Developed a medical imaging pipeline for RSNA 2023 Abdominal Trauma Detection: DICOM preprocessing, U-Net segmentation, and EfficientNetB0 classification across **1.5M+ CT scans**, achieving **94% accuracy**.
- Implemented parallel processing and GPU acceleration; pre-processed 10,000+ images via cropping, resizing, and artifact removal.

FinVision | *R · QUANTMOD · ARIMA · KNN · Neural Networks* | Solo 2024

- Built a stock market analytics tool for Goldman Sachs data (2016–2024) using ARIMA, KNN, and neural networks, achieving **93% forecasting accuracy**.
- Applied Benford's Law for anomaly and manipulation detection in stock price distributions; created visualisations for trend decomposition and long-term forecasting.

ACHIEVEMENTS

Smart India Hackathon 2023 — 1st Place	VIT University
<i>Ranked 1st among 350+ competing teams</i>	2023
Maria Phillip Futures Leader Debate — 1st Rank	Chennai
<i>3rd Rank, Tamil Nadu State</i>	2022
Robozar DRONE+ — 1st Place	SLIET Techfest
<i>Engineered autonomous medical aid drone (5 km range, 5 kg payload)</i>	2021
Patents Filed	India
<i>EmotiGen (Ref: CC2526PU172) & ECONET (Ref: CC2425PU224, PS00019487 — Patentability Search Report)</i>	2023–2024

LEADERSHIP & EXTRACURRICULAR

Founding President, Hindi Literary Club	VIT Chennai
<i>Established 150-member club; organised AARAMBH (400+ attendees) and Holi Fest (800+ attendees)</i>	2023
School President & Debate Champion	
<i>Led debate team to 100% win rate at regional championship; instituted monthly student leadership forums</i>	
Core Committee Member, Team Aviators Internationals	VIT Chennai
<i>Engineered autonomous medical aid drone; 1st place at Robozar DRONE+ — SLIET Techfest 2021</i>	2021 – 2022
HR Manager, PALS & Professional Services, Rotaract VITC	
<i>Managed HR operations and community outreach programs</i>	2022 – 2023