

Hitesh Narayana

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EDUCATION

University of Southern California

Master of Science in Computer Science (MSCS)

GPA: 3.85/4.0. Courses: Algorithms, Information Retrieval, Machine Learning, Deep Learning, Multimodal Learning

Los Angeles, CA

December 2025

Visvesvaraya Technological University

Bachelor of Engineering in Information Science and Engineering

GPA: 9.0/10.0. Courses: Data Structures, Computer Networks, Artificial Intelligence, Big Data, Database Systems

Bengaluru, India

July 2023

EXPERIENCE

Keck Medicine of USC

Software Engineer Intern

San Diego, CA

January 2025-December 2025

- Shipped full-stack standalone module within cloud-native data system (EDC) supporting 15+ sites (10K+ participants), implemented role-based access controls, audit-ready change history and achieved 95% test coverage via Test-Driven Development.
- Built CI test telemetry and reporting in GitHub Actions (pytest, Cypress). Exported results into dashboards/reports to speed triage, improve debugging and release confidence in a compliance-heavy environment.

USC Information Science Institute

Graduate Research Assistant

Los Angeles, CA

July 2024-December 2024

- Developed rate-limited public social data collection and reproducible ETL on High Performance Computing (HPC) to curate a 46M-post election discourse dataset. Added quality gates and lightweight NLP validation, supporting the ICWSM 2025 (CySoc) release.

Genpact

Management Trainee

Bengaluru, India

July 2023-December 2023

- Unified workforce data across 5 systems for 30K employees, cutting executive reporting turnaround 70% and reducing ad-hoc queries 40% through automated ETL, a normalized reporting layer, and KPI dashboards.

RESEARCH/PROJECTS

PocketLLM | USC, Software Architectures

(React, Node.js, MongoDB, Docker, Ollama)

- Developed local multi-user LLM chat portal with streaming responses, durable session history, and citation-backed document Q&A; shipped via Docker with auth and admin monitoring.

Multimodal Misinformation Detection | Capstone Project, Advisor: Nikos Kanakaris

(PyTorch, HuggingFace, PEFT)

- Created parameter-efficient multimodal misinformation detector (text, image, graph) with modality ablations and imbalance handling; improved fake-class F1 from SOTA 56% to 73% on real-world astroturf data.

FITGPT | 2nd Place, USC HackSC'24

(Flask, React, AWS, OpenSearch)

- Built an AI training assistant with a retrieval layer over wearable/workout history (OpenSearch) and a low-latency web app; delivered personalized recommendations and shipped a live demo in 24 hours.

Emotion Recognition with Feature Fusion | USC, Multimodal Probabilistic Learning for Human Communication

(PyTorch, HuggingFace)

- Emotion classifier combining text, audio and video cues, achieved 62.6% F1 and improved 15% over baseline on held-out speakers.

Distributed Indexing | USC, Information Retrieval

(Java, Hadoop)

- Implemented MapReduce inverted index pipeline supporting unigram/bigram search over a 10GB+ corpus.

SKILLS

- Programming Languages:** Python, SQL, TypeScript/JavaScript, Java
- Frameworks:** Django, Django REST Framework, FastAPI, React, Node.js/Express
- Data Systems:** PostgreSQL, SQL Server, MySQL, MongoDB, Redis, Spark, ETL
- Cloud and DevEx:** AWS, Docker, Kubernetes, Git, GitHub Actions, Grafana, Prometheus
- Libraries:** PyTorch, pandas, numpy, scikit-learn, HuggingFace, NLTK

PUBLICATIONS

- "A Public Dataset Tracking Social Media Discourse about the 2024 U.S. Presidential Election on Twitter/X." Workshop Proceedings of the 6th International Workshop on Cyber Social Threats (CySoc) at **ICWSM 2025**.
- "E-voting System Using Blockchain Technology and Homomorphic Encryption" International Journal for Research in Applied Science & Engineering Technology (**IJRASET**) **2023**.

AWARDS & LEADERSHIP

- 2nd Place**, HackSC'24 SoCal Tech Week Hackathon for Athletics' Track.
- Executive Board Member-Outreach, G.R.I.D.S at USC: **Led outreach initiatives** and partnered with external orgs to boost visibility and participation in USC's data science events.