ANAY SINHAL

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Available for Summer 2026 internships (May to Aug 2026)

EDUCATION

University of Florida
Gainesville, FL, USA

M.S. Computer & Information Science & Engineering — *Aug 2025 – Present*
- Graduate and CISE Senior Certificate coursework (Spring 2025) GPA: 3.91/4.00
- Expected graduation Dec 2026.

JK Lakshmipat University
Jaipur, India

B.Tech. Computer Science & Engineering — *Aug 2021 – May 2025*
- CGPA: 8.76/10.
- Semester Exchange, **Indian Institute of Technology Kanpur**, Spring 2024.
- Semester Exchange, **Indian Institute of Technology Gandhinagar**, Fall 2022.

TECHNICAL SKILLS

Languages: Python, Java, JavaScript/TypeScript, Go, C++, Gleam
AI/ML: PyTorch, TensorFlow, scikit-learn, Hugging Face, NLP, Computer Vision, LLM fine-tuning
Web: React, Next.js, Node.js, Django, FastAPI, Spring Boot, HTML/CSS
Data & Infra: PostgreSQL, MongoDB, Redis, SQL, Docker, Git, CI/CD, AWS, Bash
Tools: Postman, Figma

EXPERIENCE

Intelligent Clinical Care Center (IC3), University of Florida
Gainesville, FL, USA

Graduate Student Assistant — *Sep 2025 – Present*
- Build Dockerized ETL pipelines to ingest and harmonize multi site clinical and environmental datasets into research ready schemas.
- Standardize workflows and logging across HiPerGator and on prem deployments, cutting environment setup and onboarding time for new analyses.

Indraprastha Institute of Information Technology Delhi (IIIT-D)
New Delhi, India

Research Assistant — *Sep 2024 – Oct 2024*
- Developed full stack applications (Next.js, Node.js, PostgreSQL) backing AI based cancer and ECG diagnostic models.
- Set up CI/CD pipelines with automated testing to reduce manual release overhead and keep production models in sync with research updates.

GeeksforGeeks
Noida, India

Software Development Intern — *May 2024 – Sep 2024*
- Rebuilt core content pages (Articles, Videos, Quizzes) using Next.js and React to improve load times and responsiveness over legacy PHP views.
- Implemented structured data and server side rendering that improved search visibility for high traffic pages.

Sardar Vallabhbhai National Institute of Technology Surat (SVNIT)
Remote

Research Intern — *May 2024 – Jul 2024*
- Built a contrastive learning pipeline with BERT for depression detection on DepressionEmo, reaching F1 score of 0.81.
- Improved F1 score by about 10 % over baseline BERT through better contextual representation and training strategy.

Indian Institute of Technology Jammu (IIT Jammu)
Remote

Research Intern — *Dec 2023 – Jan 2024*
- Developed a stacking ensemble (Random Forest, XGBoost, MLP) for stress detection on 11.5M wearable sensor records with 93.7 % macro F1 and 14.5 ms inference latency.
- Used SMOTE Tomek resampling to lift recall for the minority chronic stress class by 37 % over standard oversampling.

Dexpert Systems Pvt. Ltd.
Pune, India

Software Development Intern — *Jun 2023 – Jul 2023*
- Integrated React front end with Spring Boot and Laravel services for Zoho CRM workflows, cutting lead assignment latency from minutes to near real time.
- Designed REST APIs with JWT based authentication and delivered Docker Compose stacks and documentation for handoff.

Projects

Medlyze: AI Powered Diagnostic Support Platform | *Next.js 15, PostgreSQL/Prisma, Tailwind, LLM*   *Oct 2025*
- Implemented encrypted medical report intake with AES 256 file encryption, regex based de identification, and role based access for patients and clinicians.
- Added multimodal analysis across PDFs and images using LLM and vision models with longitudinal biomarker tracking and risk scoring views.

Sepsis Sentinel | *Python, FastAPI, XGBoost, React, Docker, PostgreSQL*   *Jul 2025*
- Trained XGBoost and LightGBM models for early sepsis detection from EHR data with AUROC 0.89 on validation cohorts.
- Built a FastAPI service and React dashboard to surface risk scores and trends, showing up to 4 hour earlier alerts in simulation.

FinMate: Personal Finance Manager | *Django, React, Chakra UI, D3, Plotly*   *Jun 2025*
- Integrated Plaid API, Random Forest forecasts, and Isolation Forest anomaly detection in a Django backend to generate monthly PDF and CSV spend reports.
- Developed a React dashboard with interactive charts and budget alerts via email and in app notifications.

Intelligent Local News Analytics Platform | *Python, spaCy, BERTopic, BART, Flask*   *Apr 2025*
- Built an NLP pipeline that clusters over 2k news items per day and flags emerging events with F1 score 0.83.
- Deployed a Flask dashboard with scheduled updates to reduce manual monitoring effort for editors.

Publications

Battery-Aware Super-Peer and Fountain Coding in Java P2P Systems.
Discover Internet of Things, Springer Nature, Nov 2025. DOI: 10.1007/s43926-025-00240-3.

Optimizing Diagnostic Accuracy in Healthcare by Using Deep Learning.
2025 IEEE 4th World Conference on Applied Intelligence and Computing (AIC), Nov 2025. DOI: 10.1109/AIC66080.2025.11211920.

LoRA-Tuned Segment Anything Model for Few-Shot Polyp Segmentation in Colonoscopy Images.
Journal of Carcinogenesis, Sept 2025. DOI: 10.64149/J.Carcinog.24.3.372-386.

Stress Monitoring in Healthcare: An Ensemble Machine Learning Framework Using Wearable Sensor Data.
Fifth International Conference on Innovations in Computational Intelligence and Computer Vision, accepted; to appear in Springer proceedings.

Contrastive Learning and Large Language Models for Depression Detection from Social Media.
2025 IEEE International Conference on Contemporary Computing and Communications, accepted; to appear in IEEE Xplore.

Patents

A Method for Disaster-Resilient Digital File Dissemination via Fountain-Coded Broadcast with Super-Peer Election and Sparse Acknowledgement.
Indian Patent Application No. 202511063465, published Jul 2025.

A Stress Monitoring System Using Wearable Sensor Data Integrated with an Ensemble Machine-Learning Model.
Indian Patent Application No. 202511044124, published May 2025.

Relevant Coursework

Graduate: Distributed Operating Systems Principles, Analysis of Algorithms, Advanced Data Structures, Computer Networks, Software Engineering, Data Science.
Undergraduate: Database Systems, Machine Learning, Object Oriented Programming.