Satya Nandivada
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SUMMARY

Deep Learning Systems Engineer and Computational Biologist skilled in distributed GPU training, scalable ML pipelines, and single-cell multi-omics analysis. Experienced in research, startups, and enterprise settings delivering impactful Machine Learning and cloud Infrastructure solutions.

EXPERIENCE

DeepOMAP L.L.C, Portland, Maine
Founding Engineer | Computational Biologist — March 2025 – Present

- Architected AI-driven data pipelines processing 158,000+ single cells and 36,000+ RNA features using Python, Airflow, and PyTorch, enabling large-scale attribution and inference workflows.
- Developed transformer and graph attention models for high-dimensional classification (99% accuracy, 0.99 F1 score), demonstrating expertise in algorithmic pattern discovery across complex datasets.
- Optimized model training with mixed precision and GPU acceleration, and established robust MLOps workflows for reproducible experiments, **CI/CD** automation, and high-throughput, production-ready inference.

Gamer Alliance Members of Esports L.L.C, Remote
Software Engineer — July 2025 – October 2025

- Designed CI/CD pipelines on AWS integrating S3 APIs and containerized deployment for continuous delivery of data-intelligence services, aligned with TRM's distributed intelligence systems.
- Automated multi-platform integration workflows (Firebase, Flutter, REST APIs) to ensure cross-channel attribution consistency and data integrity.
- Built distributed ingestion pipelines using Python, Spark, and AWS services for scalable feature tracking and anomaly detection analogous to blockchain event processing.

Vanaja Systems Biology lab, Roux Institute at Northeastern University
Computational Biology Research Assistant/ Fall-Coop — July 2024 – December 2024

- Built ODE-based models quantifying drug response dynamics with 92% fit accuracy; validated temporal data patterns comparable to transaction-based sequence modeling.
- Processed 20,000+ scRNA-seq profiles using Seurat and GSEA to identify key pathway signatures, translating into expertise in identifying attribution signals from complex graphs.

Vanaja Systems Biology lab, Northeastern University
Research Assistant

- Benchmarked advanced deep learning frameworks (scVI, sciPENN, SAVER-X) for genotype–phenotype mapping, refining expertise in probabilistic modeling, Bayesian inference, and explainability.
- Applied Kalman filtering and signal-processing techniques to denoise single-cell expression data, enhancing model accuracy and robustness beyond standard normalization pipelines.

Conduent Inc, Hyderabad, India
Application Developer-1 — July 2021 – December 2022

- Experience in large-scale **Azure**, **React.js**, **Node.js**, **Hadoop**, **Spark**, **Kubernetes** Spring Boot microservices with **Apache Kafka** for real-time streaming, reducing latency and enabling reliable distributed communication.

EDUCATION

Northeastern University MS in **Electrical and Computer engineering** (3.6/4.0) — January 2023 - May 2025
EECE 5612 Statistical Inference - *Bayesian Statistics, maximum likelihood detection, Cramer-Rao bound.*
CS5600 Computer Systems - *Context switching, Program loading and Multithreading synchronization, performance, RAID*
CS5700 Computer Networks - *Networking Protocols, OSI Model, BGP, NAT, DNS, TCP, OSPF, RIP, load balancing, content delivery networks*

Gitam University B. Tech in **Electronics and Communication engineering.** — March 2017 – April 2021

CONFERENCES

- **Poster and Flash Talk Presentation:** A complete mathematical model of the MAPK pathway predicts mechanisms of resistance to BRAF inhibition in BRAF V600E-driven tumors. **International Conference of Systems Biology** (**ICSB 2024**), **IIT Mumbai**, India. December 2024.