Stanley Sujith Nelavala

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Education

University of Minnesota Duluth — Duluth, MN
Master of Science in Computer Science - 4.0/4.0

IIITDM Kancheepuram — Chennai, India
Bachelor of Technology in Computer Science - 8.19/10

Technical Skills

Languages: Python, Java, C, C++, SQL, Dart, Swift, YAML

Cloud & DevOps: AWS (EC2, S3, RDS, Load Balancer, IAM, Route 53, API Gateway, Amplify), Docker, Git, GitHub

Software Development: Microservices (Spring Boot, Java), REST APIs, GraphQL, Agile Methodologies, SDLC (all phases), Unit Testing (JUnit), Swagger

Web & Mobile Development: React.js, Redux, Node.js, Flask, Bootstrap, Flutter, Android Studio, Xcode, Google APIs

Tools & Technologies: VS Code, IntelliJ, CLion, PyCharm, Eclipse, Figma, LaTeX, Pandas, Plotly, RStudio, Jira

Certifications

- **AWS Certified Solutions Architect – Associate** (Feb 2025 – Feb 2028) — *Credential*

Projects

Investigating Multi-Modal Misinformation on Transgender and Non-Binary Issues Aug'23 – Aug'25
- Built an end-to-end multimodal pipeline (Python, Node.js, MySQL) to collect **1M+ TikTok videos** and **300k+ authors**, integrating Prolific-based participant data with automated scraping.
- Implemented **GPU-accelerated frame extraction** (FFmpeg) and **OCR** (PaddleOCR) for text/caption parsing with systematic metadata and engagement enrichment.
- Applied **BERTopic**, **K-Medoids clustering**, and influence scoring to model misinformation themes, creator dynamics, and amplification networks.

MarketPulseRT – Real-Time Stock Market Data Pipeline | *Apache Kafka, AWS Glue, Athena* Dec'24 – Jan'25
- Built a real-time data pipeline to ingest, process, and analyze live stock market data using Apache Kafka for stream processing and Python for data transformation and ingestion.
- Deployed services on AWS EC2 and utilized S3 for data storage, AWS Glue for ETL operations, and Athena for SQL-based querying over large-scale financial datasets.
- Implemented data partitioning, schema evolution handling, and fault-tolerant streaming to ensure reliable, low-latency insights suitable for market trend analysis and financial forecasting.

Bulldog-On-Board: University Transition Assistance App | *Flutter, Figma, Firebase* Jan'24 – May'24
- Designed and developed a mobile app in Flutter to streamline the transition process for newly admitted students, providing a centralized hub for campus resources, events, and academic support.
- Built a secure backend with Firebase, enabling real-time authentication, cloud storage, and personalized student dashboards, ensuring seamless access to critical university information.
- Crafted an intuitive UI/UX with Figma, optimizing navigation and engagement through interactive campus maps, event reminders, and student support features.

Research and Teaching Experience

Graduate Research Assistant Aug'23 – Aug'25
Comp4SoG Lab - University of Minnesota, Duluth Duluth, MN
- Conducting research on "Investigating Multi-Modal Misinformation on Transgender and Nonbinary Issues on TikTok" under the guidance of Professor Md Momen Bhuiyan.
- Engineered a large-scale multimodal pipeline (Python, Node.js, MySQL, FFmpeg, PaddleOCR) to collect and analyze **1M+ TikTok videos** and **300k+ authors**, applying BERTopic, clustering, and influence scoring to study misinformation dynamics.

Graduate Teaching Assistant Aug'23 – Dec'24
Dept. of Computer Science - University of Minnesota, Duluth Duluth, MN
- Assisted in teaching CS-1, CS-1151: Introduction to Python, CS-4242/5242: Natural Language Processing, and CS-4442/5442: Parallel Programming, reinforcing expertise in Programming distributed computing, and automation.
- Led office hours and lab sessions, mentoring students in coding best practices, debugging, and performance optimization.