

Stanley Sujith Nelavala

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Education

University of Minnesota

Duluth, MN

Master of Science in Computer Science - 4.0/4.0

IITDM Kancheepuram

Chennai, India

Bachelor of Technology in Computer Science - 8.19/10

Technical Skills

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

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

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

Tools and Dev Technologies: VS Code, IntelliJ, CLion, PyCharm, Eclipse, JUnit, Figma, LaTeX, Pandas, Plotly, RStudio

Certifications

- AWS Certified Solutions Architect – Associate
Amazon Web Services (AWS) – Issued Feb 2025 — Expires Feb 2028

Projects

Investigating Multi-Modal Misinformation on Transgender and Non-Binary Issues Aug'23 – Present

- Developed an automated pipeline for collecting, processing, and analyzing misinformation in TikTok videos, integrating Python, Node.js, and MySQL to extract metadata, download videos, and perform text and visual content analysis.
- Implemented a video processing workflow, utilizing FFmpeg and PaddleOCR to extract frames, analyze engagement trends, and perform optical character recognition (OCR) on video text for misinformation classification.
- Designed interactive data visualization and topic modeling using Pandas, Plotly, and LDA, enabling trend analysis and topic identification in social media misinformation discourse.

CADCart - Cloud-Based CAD model Repository | AWS, Flask, Node.js Dec'24 – Present

- Designed and developed a scalable web platform for CAD model contribution and access, similar to GitHub but tailored for CAD designs, deployed on AWS (EC2, S3, RDS, IAM, Route 53) to ensure high availability and security.
- Implemented an elastic load balancer to enhance fault tolerance and system performance, while ensuring secure user authentication and access control using AWS IAM and role-based authorization.
- Optimized database performance through indexing and query tuning for large-scale model storage and retrieval, leveraging AWS Cloud Shell to automate deployments and manage infrastructure efficiently.

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

Dec'24 – Present

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.
- Designed and implemented data collection and processing systems to gather and analyse TikTok data for research purposes. Currently analysing and developing a framework to analyze TikTok video watch history and videos collected from participants, enabling deeper insights into misinformation patterns.

Graduate Teaching Assistant

Aug'23 – Dec'24

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.