# NAGA VENKATA SAI CHENNU

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## PROFESSIONAL SUMMARY

AI/ML Engineer and Computer Science graduate researcher with 5 peer-reviewed publications (50+ citations) and 1 registered copyright. Currently pursuing M.S. in Computer Science at George Mason University (GPA: 3.52) with a focus on LLM interpretability, multilingual NLP, and AI-driven automation. Built production AI pipelines processing 1,000+ documents using Claude API, and developed multi-agent research systems. Holds NVIDIA Generative AI certification and 3 AWS certifications. Seeking AI Engineering, Prompt Engineering, or GenAI Development roles.

## TECHNICAL SKILLS

**Languages:** Python, Java, JavaScript, SQL, R, HTML/CSS, Bash

**AI/ML:** LLMs (GPT, Claude API), Deep Learning, NLP, Neural Networks (ANN, CNN, RNN), CatBoost, Random Forest, Ensemble Methods, Text Mining, Speech Processing, Predictive Analytics, RAG Architectures

**Frameworks & Tools:** TensorFlow, PyTorch, FAISS, Pinecone, ChromaDB, Hugging Face, scikit-learn, Pandas, NumPy

**Cloud & Data:** AWS (3x Certified), Data Pipeline Design, ETL, SQL/NoSQL Databases, REST APIs, Docker

**Security:** AI-Based Cybersecurity Risk Assessment, Network Security, DNS Anomaly Detection, Ethereum Blockchain, Smart Contracts

**Development:** Full-Stack (Python, Java), Component-Based Architecture, Agile, Git, CI/CD

## EDUCATION

**Master of Science in Computer Science** *Aug 2024 – May 2026*
*George Mason University* | Fairfax, VA
GPA: 3.52/4.00 | 27 credits completed | Key Courses: Network Security (A–), Software Engineering for WWW (A), Component-Based Software Dev (A–), Database Systems, Data Mining, Analysis of Algorithms

**Bachelor of Technology in Computer Science & Engineering** *May 2020 – May 2024*
*KL University (Koneru Lakshmaiah Education Foundation)* | Andhra Pradesh, India
CGPA: 8.29/10.0 | Key Courses: Machine Learning (A+), AI for Data Science (A), Data Structures (A+), Algorithms (A+), Computer Networks & Security (A)

## RESEARCH EXPERIENCE

**Graduate Research Assistant** | *Costello College of Business, George Mason University* | Fairfax, VA*Aug 2025 – Present*
**Advisors:** *Dr. Saurabh Mishra (Marketing Analytics & AI), Dr. Jiyeon Hong (AI Personas & Customer Experience)*

- Built an AI automation pipeline analyzing 1,000+ trademark opposition cases using Claude API for visual intelligence, document classification, and structured data extraction
- Constructed structured datasets from Factiva and proprietary sources for NLP-based marketing analytics and statistical modeling
- Conducting literature review on AI-driven personas, studying how LLMs generate adaptive, context-aware agents for customer engagement and personalization

**Undergraduate Research Assistant** | *Dept. of CSE, KL University* | India *May 2022 – May 2024*

- Published 4 Scopus-indexed journal articles and 1 IEEE conference paper across AI/ML, NLP, cybersecurity, and blockchain over 2 years
- First-authored studies on AI-based cybersecurity risk mitigation and ensemble ML methods for predictive healthcare analytics
- Co-authored research on psychological stress detection using ANN/CatBoost (achieving improved classification accuracy) and Ethereum blockchain-based land registration systems
- Presented speech quality assessment research for Indian languages at IEEE ICICT 2023, Tribhuvan University, Nepal

## KEY PROJECTS

**Multi-Agent AI Research Discovery Platform**

- Designed a 23-agent research automation system using Mixture of Experts (MoE) architecture for automated literature discovery and analysis
- Integrated RAG pipelines with vector databases (FAISS, Pinecone, ChromaDB) for multi-modal document retrieval and processing

**Trademark Analysis Pipeline (Claude API)**

- Developed production-scale document processing system handling 1,000+ trademark cases daily with automated classification and data extraction
- Achieved significant cost optimization through prompt caching and efficient API usage patterns

**DNS Anomaly Detection System** *(ISA 656 – Network Security Course Project)*

- Built ML-based DNS anomaly detection system applying network security principles to identify malicious DNS traffic patterns

**Dynamic Adaptive Data Transmission System** *(Copyright Registered: L-142224/2024)*

- Co-authored system integrating Recurrent Neural Networks with Bit-Interleaved Coded Modulation for enhanced QAM and PSK signal processing

## SELECTED PUBLICATIONS

***5 Peer-Reviewed Publications | 50+ Citations | Scopus Author ID: 58404553900***

[1] Sai, C.N.V. et al. (2023). "Assessing the Effectiveness of AI Techniques in Mitigating Cyber Security Risks." Int. J. of Intelligent Systems & Applications in Engineering, 11(4). [First Author]

[2] Sai, C.N.V. et al. (2023). "Enhancing Hairfall Prediction: Comparative Analysis of Individual Algorithms and Ensemble Method." IJRITCC, 11(6s). [First Author]

[3] Jayanthi, G. ... & Sai, C.N. (2024). "Comparative Analysis of Psychological Stress Detection: ANN and CatBoost Algorithm." IJISAE, 12(1).

[4] Subedha, V. ... & Sai, C.N.V. (2023). "Streamlining Land Registration using Ethereum Blockchain." IJISAE, 11(4).

[5] Manasa, A. ... & Sai, C.N. (2023). "Speech Quality Assessment in Indian Languages." IEEE ICICT 2023. DOI: 10.1109/ICICT57646.2023.

## INTELLECTUAL PROPERTY

- Copyright L-142224/2024: Dynamic Adaptive Data Transmission System (RNN + BICM for QAM/PSK) — Registered Jan 2024

## PROFESSIONAL CERTIFICATIONS

- **NVIDIA Certified Associate: Generative AI and LLMs** — NVIDIA (Feb 2026)
- **AWS Certified AI Practitioner** — Amazon Web Services (Nov 2025)
- **AWS Certified Cloud Practitioner (CLF-C01)** — Amazon Web Services (2022)
- **AWS Certified Developer Associate** — Amazon Web Services (2022)
- **Red Hat Certified Enterprise Application Developer (EX 183)** — Red Hat (2022)
- **Claude Code Certification** — Anthropic (Dec 2025)

## LANGUAGES

**English** (IELTS Certified) | **Telugu** (Native) | **Hindi** (Fluent)