# Yukta Kulkarni

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## EDUCATION

**New York University**, Master of Science, Computer Science and Engineering (3.66/4.0) Expected: May 2026
*Relevant Coursework: Professional Software Engineering, Algorithms, Machine Learning, Deep Learning, Artificial Intelligence, Big Data, Software Engineering, Information Visualization, Post-Quantum Cryptography, Information Security and Privacy*

**SRM Institute of Science and Technology**, B.Tech. Computer Science and Engineering (8.98/10) May 2024
*Relevant Coursework: Data Structures, Artificial Intelligence, Computer Architecture, Object-Oriented Programming, Software Engineering & Project Management, Neuro-fuzzy and Genetic Programming*

## TECHNICAL SKILLS

***Programming Languages:*** Java, Python, C/C++, SQL, TypeScript/JavaScript
***Technologies*:** PostgreSQL, MongoDB, Redis, RabbitMQ, AWS (S3/EC2), Docker, Kubernetes, Spark, Hadoop, Microservices
***Data/ML/Cloud***: PyTorch, TensorFlow, scikit-learn, NumPy, Pandas, OpenCV; Hugging Face Transformers, LangChain (RAG); Data Structures and Algorithms,NLP, Statistics,Data Science, Business Analytics, MongoDB
***Platforms/Tools:*** FastAPI /OpenAPI, React/Next.js, Tableau, Docker, CI/CD Pipelines, Git, System Design, Performance Optimization

## PROFESSIONAL EXPERIENCE

*Artificial Intelligence Engineer Intern,* **Systematic Ventures,** *New York, USA* Jul. 2025- Aug. 2025

- Accelerated investment decisions by ~30% by building a financial intelligence SaaS using GPT-based reasoning, MongoDB joins, and vector semantic search across 370K+ companies and 850K+ funding rounds.
- Developed production AI modules (GPT-4o + RAG) with context-aware query flows and optimized semantic + metadata retrieval, merged into the company's core backend.

*Machine Learning Engineer Intern,* **Samsung R&D Institute,** *Remote, India* May 2023- Nov. 2023

- Developed an ML-based Auto Security Vulnerability Detection Framework that fortified cloud service security for production environments, enhancing XSS and SQL Injection detection accuracy by 40% and reducing manual review time.
- Automated CI/CD pipelines and Kubernetes-based deployments testing pipelines across 15+ Samsung and partner web platforms, including SmartThings API, improving vulnerability detection speed and mitigation efficiency, and contributing directly to core cloud security workflows.

## ACADEMIC PROJECTS

**Stonklytics : AI-Powered Stock Market Research Assistant** 2025

- Django-React web app that consolidates financial statements, news, ratings and social sentiment into unified stock reports.
- Incorporating AI methods (OpenAI for summarization, Grok for sentiment) to highlight key insights and provide contextual explanations, with MVP features including stock search, authentication, and AI-powered insights.

**GrubSync : Group-Centric Restaurant Recommendation System** 2025

- Engineered a full-stack, event-driven restaurant recommender using React (TypeScript, Tailwind) and Node.js/Express, enabling JWT authentication, group workflows, and preference management.
- Implemented real-time and batch data pipelines with Redis Streams, Dask, and scikit-learn to generate low-latency, data-driven group recommendations.

**GreenLens : Edge AI Sustainability Assistant (Qualcomm Edge AI Developer Hackathon Finalist, NYC)** 2025

- Built an offline-first Edge AI application deployed on Snapdragon X / X Elite Copilot+ PCs, an end-to-end edge inference pipeline optimized for performance, energy efficiency, and offline execution on constrained hardware enabling real-time grocery classification and sustainability analytics.
- Implemented YOLOv8 for on-device object detection and lightweight regression model for $CO_2$ estimation, deployed using ONNX Runtime for Qualcomm NPU acceleration.

**Neuro-Symbolic AI for Commonsense Reasoning (Researcher at National University of Singapore)** 2023

- Conducted research on dimensionality reduction and mathematical modeling Neuro-Symbolic AI for Commonsense Reasoning, integrating neural networks with symbolic reasoning to enhance contextual understanding and improve accuracy by 35%.
- Generated actionable recommendations to address limitations of traditional algorithms, leading to reduced error rates in commonsense reasoning tasks.

## PUBLICATIONS

**Treatment Recommendation Using BERT Personalization** - Published in Journal of Innovation in Web Engineering (2024)
**Enhancing Algorithmic Resilience Against Data Poisoning Using CNN** - Published in Risk Assessment and Countermeasures for Cybersecurity (2024)

## ACHIEVEMENTS & ACTIVITIES

**Teaching Assistant** - NYU Tandon School of Engineering Sept 2025 - Present
**Winner at the 2nd International Article Writing Competition –** MMU Press, Malaysia July 2024
**Academic Winner Award (Sept 2020- May 2024) -** Department of Computing Technologies, SRMIST May 2024