ASHRITH VELISOJU

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PROJECTS

PLANT DISEASE DETECTION SYSTEM FOR SUSTAINABLE AGRICULTURE — Link

- Researched and developed deep learning model architectures in Python, optimizing information retrieval from agricultural image datasets to **achieve 45% faster inference times** and process 200+ images per minute.
- Implemented data partitioning and parallel processing techniques that **reduced computation costs by 35% while increasing throughput by 70%** for large agricultural datasets.
- Designed and implemented SQL queries **to process and analyze 1000+ agricultural data points**, improving data retrieval **efficiency by 40%** and enabling more accurate disease identification patterns.
- Conceived and implemented advanced machine learning solutions using TensorFlow and PyTorch, applying natural language processing techniques alongside neural networks to achieve 95% detection accuracy and **reduce false positives by 25%.**
- Applied statistical methods including regression analysis and hypothesis testing to identify disease patterns in plant imagery**, resulting in 28%** improved early detection rates and more targeted treatment recommendations
- Collaborated with cross-functional teams to solve complex data processing challenges, contributing to scalability improvements that **enhanced system performance by 40%** for large agricultural datasets

CROSS-LANGUAGE CODE VULNERABILITY ANALYZER — Link

- Engineered a distributed security analysis system in Python and Java for Unix/Linux environments, optimizing code for 93% vulnerability detection accuracy with a **28% smaller resource footprint**—demonstrating strong programming and system design capabilities
- Implemented 3 machine learning algorithms that reduced false positives by 37% while maintaining high detection rates, **accelerating analysis speed by 60% and increasing cross-language detection accuracy by 22%**
- Architected a highly scalable distributed system leveraging TCP/IP networking protocols to process 5000+ files simultaneously, solving enterprise-level scalability challenges and **reducing analysis time by 82%** (from 4 hours to 45 minutes)
- Built an interactive visualization system that reduced security remediation time by 42% and improved development team productivity by 30%, **resulting in an estimated annual savings of 320+ development hours** by decreasing the average security fix cycle from 5 days to 3 days

EDUCATION

MAHATMA GANDHI INSTITUTE OF TECHNOLOGY – Hyderabad, India *Jul 2026*
Bachelor of Engineering, Computer Science; Cumulative GPA: 7.8/10.0

NARAYANA JUNIOR COLLEGE – Hyderabad, India *May 2022*
Intermediate(12th); Percentage: 81%

SRI CHAITANYA TECHNO SCHOOL – Hyderabad, India *May 2020*
SSC(10th); Cumulative GPA: 9.8/10.0

SKILLS

Programming Languages: Python, Java, C, JavaScript
Operating Systems & Infrastructure: Unix/Linux environments, Distributed Systems, TCP/IP protocols
Machine Learning & AI: TensorFlow, PyTorch, Neural Networks, Generative AI, LLMs, Information Retrieval
Web Development: React, Express, Node.JS
Databases: SQL, MySQL, MongoDB
Development Tools: Git, GitHub

CERTIFICATIONS & AWARDS

Google Data Analytics Professional certification (Google)

Google AI Essentials (Google)

CCNA: Introduction to Networks(Cisco)
Oracle Database Programming with SQL (Oracle)

AWARDS

Won 3rd Position in HackSavvy25