AACQUILINE LINU VARGHESE

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SUMMARY

Computer Science student (B. Tech '26) specializing in AI/ML and full-stack development, with expertise in Python, Java, web development, and cybersecurity. Currently interning at IEEE CIS Summer Internship, applying deep learning and coding skills to real-world projects. Seeking roles in AI-driven automation or scalable systems to leverage my technical skills and hackathon experience in solving complex problems.

TECHNICAL SKILLS

- **LANGUAGES:** *Python, C/C++, JAVA, HTML/CSS*
- **FRAMEWORKS/TOOLS**: *PyTorch, Git/GitHub*
- **DOMAINS**: *AI/ML, Deep Learning, Computer Vision, Cybersecurity*

WORK EXPERIENCE

IEEE CIS SUMMER INTERN
Key Contributions:
- *Researched and implemented image processing techniques (edge segmentation, filtering) to preprocess datasets for AI models.*
- *Conducted a case study on neural networks (Alex Net, CNN) to evaluate performance in computer vision tasks.*
- *Learning PyTorch framework to develop an AI-based Computer Vision project focused on image segmentation.*

Skills Gained: *Computer Vision, PyTorch, Neural Networks (CNN), Image Processing, Image Segmentation*

PYTHON INTERN | R & Ee Forum   *November 2023- December 2023*
Basics to Advanced
Key Contributions:
- *Mastered Python fundamentals to advanced concepts, including NumPy, Matplotlib, and OOP principles.*
- *Gained hands-on training in Python data structures (lists, dictionaries, trees) and algorithmic problem-solving.*
- *Developed practical applications using data visualization (Matplotlib) and numerical computing (NumPy) libraries.*

Skills Gained: Python Programming, NumPy, Matplotlib, Data Structures, Algorithm Design

PROJECTS

CROWD MONITORING AND ALERT SYSTEM | MINIPROJECT
Python, YOLOv11, OpenCV, Twilio API, MongoDB
Key Contributions:
- *Developed an AI-powered crowd density analyzer using YOLOv11 for real-time person detection, achieving 90%+ accuracy in high-density scenarios.*
- *Implemented Gaussian kernel density mapping to calculate crowd density thresholds, triggering automated alerts via Twilio API (WhatsApp/email) when limits were exceeded.*
- *Designed a user-friendly dashboard (HTML/CSS/JavaScript) to visualize real-time heatmaps, historical trends, and alert logs.*
- *Optimized the backend with MongoDB for scalable data storage and retrieval, ensuring compliance with data privacy standards.*
- *Collaborated in a team of 4 to integrate OpenCV-based video processing and object tracking, reducing false positives*

EDUCATION

Bachelor of Technology (B. Tech) in Computer Science & Engineering   *2022-2026*
- LBS Institute of Technology for Women | CGPA: 8.41

Higher Secondary Education | Computer Science   *2019-2021*
- Percentage: 95.6%

SSLC
- Percentage: 96%

CERTIFICATIONS & ACHIEVEMENTS

- **NPTEL Cloud Computing (May 2025)** | Indian Institute of Technology, Kharagpur (IITK)
- **Google Cybersecurity Certification (March 2025)** | Network Security, Threats, Vulnerabilities, Assets
- **IBM SkillsBuild Winter Certification Program – Data Analytics** (January 2025)
- **ASAP Online Bootcamp Chatbot Development** (October 2024)
- **Best Project Award | Arduino Simulation using TinkerCard** | IEEE RAS SBC LBSITW (April 2023)

LANGUAGES

- English
- Hindi
- Malayalam