VASANTH C

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Software Engineer with strong problem-solving skills and a solid understanding of core principles including Object-Oriented Programming, Data Structures, Operating Systems, and Database Management. Passionate about developing efficient and innovative software solutions.

Experience

Quantum Cryptography Intern | Indian Institute of Space Science and Technology   JUN 2025 – JUL 2025
Developed a hybrid image encryption system using E91 QKD, Chen chaotic system, and AES using **Java and Python**. The system integrated quantum and chaotic keys through BITXOR combined with SHA-256 to generate high-entropy secure keys. Its performance was validated using entropy, NPCR, UACI, PSNR, MSE, MAE, and NIST randomness tests, and a comparative analysis between E91+Chaos and BB84+Chaos demonstrated the superior security and randomness of the proposed model.

Skills

C++ • Java • Python • Spring Boot • HTML • CSS • JavaScript • React • MySQL • PostgreSQL • Hibernate • REST API • Postman • Docker • Firebase • Git/GitHub • Linux • Windows

Projects

Ai-based Document Summarization Portal is a Complete document summarization web application from scratch where users can upload documents (PDF, TXT, DOCX) and receive AI-generated concise summaries. Skills developed: Java, Python, Hugging Face, React, PostgreSQL.
Business Management System built with Java Spring Boot and MySQL to automate customer, employee, inventory, and sales operations, featuring CRUD functionality, secure access, reporting, and scalability. Skills Developed: Java, Spring Boot, MySQL, HTML/CSS, Docker, Git, REST APIs.
Python and OpenCV-based real-time Fall Detection System that uses camera input and image processing (with optional ML models) to accurately detect falls, minimize false alarms, and send instant alerts via visual, audio, or SMS notifications. Skills Developed: Python, Computer Vision.

Education

Bachelor of Engineering in Computer Science & Engineering | Annamalai University   NOV 2022 – APR 2026
8.4 CGPA* • Member of **Institution of Engineers India**
Relevant Coursework: Object Oriented Programming, Data Structures and Algorithms, Operating Systems, Computer Networks, Database Management Systems

Certifications

Java Full Stack Developer Specialization – COURSERA
AI & Quantum Computing Mastery – UDEMY
Cloud Computing Certification – NPTEL

Activities

• TCS iON NQT- IT -- 64.4% • GATE participant • Organized events and seminars • Volleyball enthusiast