Sujan Kumar K

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Professional Summary

Software Engineer with strong foundation in algorithms, data structures, and system design. Proven ability to develop efficient, scalable applications using Java, Python, and C. Experience in database design, and building performance-optimized solutions for complex engineering problems.

Technical Skills

Programming Languages: Java, Python, C, SQL

Core Competencies: Data Structures & Algorithms, Object-Oriented Programming, System Design

Technologies & Tools: MySQL, Git/GitHub, OpenCV, MediaPipe, JDBC

Development Areas: Desktop Applications, Computer Vision, Database Systems, API Development

Software Engineering: Code Optimization, Performance Analysis, Testing

Professional Projects

SignSynth - Real-Time Speech-to-Sign Language Translator
Technologies: Python, NLP, Speech Recognition, Panda3D
- Developed real-time translation system converting spoken language into sign language using animated 3D model
- Integrated advanced NLP algorithms for accurate speech interpretation and linguistic processing
- Implemented Panda3D rendering engine for dynamic, realistic hand gesture animations and facial expressions
- Designed accessibility-focused solution enhancing communication for deaf and hard-of-hearing community

Student Attendance Management System
Technologies: Java, MySQL, JDBC, Swing GUI
- Engineered comprehensive desktop application automating attendance tracking for educational institutions
- Designed normalized database schema with optimized queries reducing data retrieval time by 60%
- Implemented secure user authentication system with role-based access control for teachers and students
- Developed automated report generation feature with statistical analysis and export functionality

Computer Vision Mouse Control System
Technologies: Python, OpenCV, MediaPipe, NumPy
- Developed real-time hand gesture recognition system for contactless computer interaction
- Implemented advanced computer vision algorithms achieving 95% gesture recognition accuracy
- Optimized frame processing pipeline reducing latency to under 20ms for responsive user experience
- Integrated multi-threading for concurrent video processing and system control operations

Education

Shri Madhwa Vadiraja Institute of Technology & Management, Bantakal *2022-2026*
Bachelor of Engineering in Computer Science and Engineering **CGPA: 9.09/10**
Viveka PU College, Kota *2020-2022*
Higher Secondary Education - Science Stream **97.66%**

Career Objective

Seeking a challenging Software Engineer position to leverage expertise in algorithms, system design, and performance optimization. Eager to contribute to building scalable, high-performance software solutions while growing within a collaborative engineering team focused on innovative technology development.