Abhishek S B
Software Developer
M.Tech Software Engineering
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EDUCATION

•**M.Tech Integrated Software Engineering** *2022-2027*
Vellore Institute of Technology,Chennai CGPA: 8.6

PROJECTS

•**Enhanced Semi Conductor Wafer Defect Detection**

Deep learning-based classification of wafer defects using CNN and Vision Transformer models

- Built an automated defect detection system for semiconductor wafers using ResNet and Vision Transformers, achieving 96% classification accuracy across multiple defect types.
- Trained models on wafer map datasets to classify multiple defect types with high accuracy.
- Technology Used: Python, TensorFlow, PyTorch, OpenCV.

•**Quantum Machine Learning for Bioinformatics**

Explored QML techniques for SARS-CoV-2 variant classification using quantum circuits

- Implemented a multi-layer quantum neural network with angle encoding and parameter reuploading using PennyLane, achieving 97% accuracy on multi-class SARS-CoV-2 variant classification.
- Trained on 50k+ SARS-CoV-2 records using metadata only (no sequence data) to classify WHO-defined variants.
- Technology Used: PennyLane, Qiskit, Python, Quantum Circuits, NumPy, Pandas.

•**AI-Powered Attendance System**

An intelligent system for automated student attendance tracking using facial recognition

- Developed a smart attendance system that captures and verifies student identity using real-time face detection.
- Integrated face recognition with Firebase for backend support to automate attendance logging.

EXPERIENCE

•**Research Intern – CADS**

Vellore Institute of Technology, Chennai May 2025 – Present

- Research on Quantum Computing and Machine Learning applications in Bioinformatics.

•**AIML Intern – CubeAI Solutions Tech Pvt Ltd**

Chennai, India May 2024 – Sep 2024

- Gained hands-on experience in building and deploying ML models.
- Skilled in data preprocessing, model training, and evaluation.
- Collaborated with cross-functional teams to align models with business goals.

•**App Development Intern – NSIC**

Chennai, India Jan 2024 – Feb 2024

- Provided technical support for bug fixes during post-deployment phase.
- Optimized existing code for better performance across multiple devices.
- Implemented functionality using Java and Android SDKs; assisted in UI design using XML.

SKILLS

Languages: Java, Python, JavaScript, HTML, CSS
Libraries: Python Libraries, ReactJs
Tools: PowerBI, Git, GitHub
Frameworks: ReactJs,Flask
Cloud/Databases: Firebase, MySQL, GCP (Basics)
Relevant Coursework: Data Structures & Algorithms, Object Oriented Programming, Operating Systems, Database Management Systems, Software Engineering
Areas of Interest: Artificial Intelligence, Machine Learning, Web Development, Quantum Computing
Soft Skills: Problem Solving, Leadership, Self-learning, Presentation, Adaptability

ACHIEVEMENTS

•**INTEL GEN AI HACKATHON 2024 FINALIST**

*Developed a ML Model that predicts the defect in Semiconductor wafers based on the semiconductor defect analysis results.*Oct 2024