SHIVANGI PINGALE

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SUMMARY

Computer Science graduate student with expertise in Java, Python, and C, two years of software testing experience, and a strong academic foundation in AI and ML. Seeking full-time roles in software development or AI/ML.

EDUCATION

MS, Computer Science Graduating March 2025
Drexel University, Philadelphia, PA 3.57 GPA
Relevant coursework: Machine Learning, Software Design, Intro to Computer Vision, Intro to Artificial Intelligence, Data Structures and Algorithms, Computer Networks, Computer Graphics,Principles of Cybersecurity, System Basics, Programming, Deep Learning

Bachelor of Technology in Electronics and Communication Engineering Graduated June 2021
Vellore Institute of Technology, Vellore, Tamil Nadu, India 8.99/10 GPA
Relevant coursework: Internet of Things, Operating System, Digital Image Processing, Computer Communication, Computer Organization & Architecture, Problem Solving and Programming, Probability Theory & Random Variables, VLSI

TECHNICAL SKILLS

Programming Languages: Java, Python, C, SQL, HTML/CSS, MIPS Assembly

Software Development: Object-Oriented Programming (OOP), Data Structures & Algorithms, Software Design

Tools & Frameworks: IntelliJ, Visual Studio Code, PyCharm, Eclipse, Postman, SOAPUI, Keil microVision, Cadence, MATLAB, Multisim, NetSim, Arduino, Putty, SQL Developer, Jira

Data Analysis & Scientific Computing: NumPy, Pandas, Jupyter Notebook

Operating Systems: Windows, Unix

Testing & QA: Application Lifecycle Management (ALM), Sanity Testing, System Integration Testing, Regression Testing

Languages: English (Proficient), Marathi, Hindi

Documentation & Publishing: LaTeX

PROFESSIONAL EXPERIENCE

VOIS (Vodafone Intelligent Solutions), Pune, India: Senior Executive / Graduate Engineer Trainee Aug 2021 – Sept 2023

- Led System Integration Testing (SIT) for key projects, including 5GSA, VoLTE Roaming, and eSIM.
- Supported VoLTE Roaming, enhancing 4G connectivity for Vodafone customers internationally.
- Conducted 5GSA testing to ensure heritage systems' 5G compatibility, aiding successful UK deployment.
- Prepared test data, executed tests, and validated system performance for smooth integration.
- Identified and resolved defects in ALM to ensure high-quality product delivery.
- Conducted Sanity, SIT, and Regression Testing to maintain system reliability.

ACADEMIC PROJECTS

Diabetic Retinopathy Detection Using Transfer Learning Dec 2024
Built an automated system using ResNet-18 and transfer learning to classify fundus images into five stages of severity. Achieved 75.89% accuracy and 92.86% AUC-ROC with K-fold cross-validation and mitigated overfitting with dropout and early stopping. Visualized model predictions with Grad-CAM, ensuring clinical transparency. Tools: Python, PyTorch, NumPy, Matplotlib, and Kaggle APTOS 2019 dataset.

QUIC Chat Application June 2023
Collaborated in a team of three to develop a client-server chat system using the QUIC protocol, with TLS 1.3 encryption. Implemented features like basic user authentication, connection stability, and concurrent message streams for efficient communication.

Analysis of Resource Allocation Schemes for D2D Enabled Vehicular Communications May 2021
Analyzed two algorithms focused on optimizing resource allocation for D2D communication in vehicular networks.Enhanced the reliability of vehicle-to-vehicle links and capacity of vehicle-to-infrastructure links with the advent of 5G technology.

Data Hiding in an Image Using Discrete Cosine Transform (DCT) Method Jan 2021
Developed a watermarking method for embedding hidden data in digital images using DCT and convolutional codes to improve data detection and security.

IOT-Based Weather Reporting System Oct 2018
Designed and developed an IoT system using Arduino, ESP8266, and DHT11 sensors to collect weather data, such as temperature and humidity, and transmit it to the ThingSpeak cloud for real-time monitoring and analysis

Audio Encryption and Steganography Nov 2019
Developed an encryption and steganography system to securely hide audio information using convolution and spread spectrum techniques. Implemented the project in MATLAB for secure audio transmission.

Alphanumeric Keypad Interfacing with 8051 Microcontroller Nov 2019
Designed and implemented an alphanumeric keypad interface using the 8051 microcontroller, displaying inputs on a 16x2 LCD.The system handled characters, numbers, and special symbols for interactive user inputs.