

# KRUTHI K SHETTY

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## PROFILE SUMMARY

Aspiring and results-driven Computer Science undergraduate, eager to learn and grow. Possesses a strong work ethic and the ability to work effectively both independently and in teams. Interested in applying technology to solve practical challenges.

## EDUCATION

Bachelor of Engineering (B.E) - Computer Science and Engineering

BNM Institute of Technology, Bengaluru.

Expected Graduation: 2027 | Current CGPA: 8.56

## SKILLS

**Programming:** Python, Java, C

**Web:** HTML, CSS, JavaScript

**Tools & APIs:** Firebase, Twilio, Pushbullet, Postman

**IoT Platforms:** Raspberry Pi, ESP32, Arduino

**ML Frameworks:** OpenCV, CNNs (for image analysis)

**Interpersonal Skills:** Communication, Teamwork, Problem-solving

## VOLUNTEERING

### NSS Volunteer (2024 - Present)

Serving as an NSS (National Service Scheme) volunteer, contributed to the successful organization of a blood donation camp held at the college by assisting with coordination and event support as part of the NSS team.

## PROJECTS

### Smart Fire Detection System

- Built a fire alert system using Raspberry Pi and a digital flame sensor.
- Sent real-time SMS/call alerts via Twilio and push notifications via Pushbullet.
- Logged incidents with timestamps and static location to MongoDB.
- Included local alerts using buzzer and LED for immediate on-site notification.

### Expense Tracker App

- Developed a desktop app using Java Swing for managing income and expenses.
- Enabled category-wise tracking, budgeting, and sub-expense management.
- Used file-based local storage with serialization (no database needed).
- Built a user-friendly GUI with dynamic updates and summary display.

## Deepfake Detection System

- Implemented a CNN model to detect face-swap deepfake images using a pre-existing dataset.
- Performed classification between real and manipulated images based on visual inconsistencies.
- Successfully tested detection on custom inputs, including personal test images.
- Explored model behavior with respect to facial features and anomalies for improved reliability.

## Smart Health Monitoring System for Elderly

- Designed an IoT system using ESP32 and sensors to track vitals (HR, SpO<sub>2</sub>, temp).
- Sent data to Firebase and displayed it on a local web dashboard.
- Triggered buzzer/LED alerts for abnormal readings (e.g., HR > 100 BPM).
- Optimized for elderly care, with continuous monitoring and cloud sync.

## CERTIFICATIONS

- Introduction to Cyber Security  
*Infosys Springboard, Aug 2, 2024*
- Fundamentals of IoT Security  
*Infosys Springboard, Aug 5, 2024*
- Red Hat System Administration I (RH124)  
*Red Hat, Feb 25, 2025*
- NPTEL: Introduction to Internet of Things - IIT Kharagpur  
*NPTEL (12-week course), Jan–Apr 2025*

## LANGUAGES

English: Full professional proficiency | Kannada: Native proficiency | Tulu: Native proficiency

## INTERNSHIP AND ACTIVITIES

- Completed college-based internship in Cybersecurity and IoT
  - Gained hands-on experience in cybersecurity using PicoCTF platform through real-time challenges like flag identification.
  - Built an IoT-based project.
- Participated in IoT Workshop covering Node-RED, Mosquitto, and Publish/Subscribe mechanism.
- Attended Generative AI Workshop focused on AI model capabilities and applications.

## ACHIEVEMENTS

Published survey paper titled "*Machine Learning Models for Advancing Heart Disease Prediction and Diagnosis*" in IEEE Xplore, highlighting AI techniques such as Random Forest, SVM, and Deep Learning for early CVD detection.