

# GANGA PB

## Aspiring Electronics and Communication Engineer

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### PROFILE INFO

Final-year Electronics and Communication Engineering student. Strong analytical and problem-solving mindset, with a growing interest in software development and emerging technologies. Eager to learn and adapt quickly to new tools, frameworks, and programming concepts, while contributing to collaborative projects that create practical, realworld solutions

### INTERNSHIPS

#### ■ Worked on Embedded Python Programming using Raspberry Pi

Designed and deployed Python applications on Raspberry Pi for automation, IoT, and embedded system projects.

### PROJECT

#### IoT-Based Heart Rate and Health Monitoring System

Designed a wearable health monitoring system using ESP32 to track heart rate, SpO<sub>2</sub>, and detect critical conditions like heart attacks and falls. Integrated MAX30102, AD8232, and MPU6050 sensors for real-time physiological monitoring and fall detection. Displayed health metrics on OLED and triggered alerts with vibration motor and push-button response handling.

#### Ambient-Aware AC Control System

Developed an ambient-aware AC control system using Arduino Nano to monitor temperature, humidity, air quality, motion, and user position. Integrated DHT22, MQ-135, HC-SR501, MPU6050, and IR emitter modules for real-time environment sensing and intelligent AC control. Displayed live data on an OLED screen and automated AC adjustments to enhance comfort and improve energy efficiency.

### EDUCATION

#### 2022-present | KTU University

Btech in Electronics and  
Communication  
CGPA-7.6/10

#### 2020-2022 | Good Shepherd English Medium School,Pathanamthitta

Higher Secondary-ISC  
94%

#### 2019-2020| Good Shepherd English Medium School,Pathanamthitta

Secondary School- ICSE  
85%

### SKILLS

- Adaptability Critical Thinking
- Coordination
- Problem solving
- Teamwork Tools - Xilinx SPARTAN |
- MATLAB| Proteus | Code
- Composer Studio |
- LTSpice | canva | MS Word
- |MS Excel
- Html ,Css(Beginner-level)

### CERTIFICATES

- Mastering Rasberry PI with Python
- SmartIndia Hackathorn(Prelims)