

# POOJA K

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## OBJECTIVES

Electronics and Communication Engineering student with hands-on experience in IoT, embedded systems, and image processing. Seeking to apply programming and hardware/software integration skills to design innovative solutions in automation and IoT systems.

## EDUCATION

### KVG College of Engineering, Sullia

B.E(Electronics and Communication Engineering) - 8.59

July 2026

### Govt. PU College Kumbra, Puttur

PUC(PCMB) - 75.16%

April 2022

### Vivekananda High School Tenkila, Puttur

SSLC - 85.28%

March 2020

## PROJECTS

### IoT-based Indoor Hydroponic Fodder Grow Chamber

December 2024

- The project aimed to create a sustainable and cost-effective hydroponic system for agriculture.
- Programmed an **ESP32** microcontroller, integrating data from **DHT22** (temperature/humidity) and **LDR** (light) sensors to precisely control relays for water pumps and lighting.
- The system achieved a **20% energy saving** and **30% water efficiency** by optimizing resource delivery based on real-time environmental data.

### Fake Currency Detection using Image Processing and MATLAB

Ongoing

- Working on developing an automated counterfeit currency detection system in MATLAB to address the growing challenge of fake currency circulation.
- Implemented preprocessing techniques such as grayscale conversion, edge detection, and segmentation, followed by feature extraction for comparing security elements of currency notes.
- Currently optimizing the system using Structural Similarity Index (SSIM) to improve detection accuracy, with the goal of achieving over 99% reliability in distinguishing genuine notes from counterfeit ones.

### 8-Bit Snake Game using Pygame(Python)

May 2025

- Designed and implemented a retro-style Snake Game in Python using the Pygame library.
- Features include scorekeeping, collision detection, and sound effects, resulting in a fully interactive 8-bit arcade-style game.

## SKILLS

- **Programming:** C, C++, Python, Verilog
- **Soft Skills:** Adaptability, Time management, Teamwork, Problem Solving
- **Languages:** English, Kannada
- **Tools & Platforms:** MATLAB, Multisim, Arduino IDE, Keil, Xilinx, Jupyter Notebook
- **Core Knowledge:** Embedded Systems, IoT, Image Processing, VLSI, Digital and Analog Electronics, Communication Systems

## CERTIFICATES

- **Programming in Java (Elite Certificate)** - NPTEL, IIT Kharagpur | Apr 2025
- **GenAI Powered Data Analytics Job Simulation** - Tata & Forage | Jul 2025
- **Communication & Soft Skills Training** (36 hours) - KVG College of Engineering and Seventh Sense Talent Solutions | Jun 2023
- **Introduction to Artificial Intelligence** - Great Learning | Nov 2024
- **Getting Started with Arduino UNO** - Infosys Springboard | Jul 2024