



Amish B. Kulkarni

Bachelor of Engineering
Electronics And Communications
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EDUCATION

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.E., ECE	KLE Technological University, Hubli	9.08	2022-2026
Senior Secondary	BASE PU College, Hubli	91 percent	2020-2022
Secondary	Dr.G.V. Joshi Rotary English Medium high School	96.5 percent	2020 grad

PROJECTS

- **Pseudo CNC Bot: capable of writing a given string on a sheet of paper**
Tools: Arduino, Nema 17 Stepper Motors, Corresponding Motor Driver, Toy Servo motor, C++, Breadboard, Jumper Wires 
 - Developed a 3-axis CNC bot utilizing stepper motors controlled via Arduino to automate text writing on paper
 - Implemented motor control logic consisting of 1000+ lines of C++ to manage precise movements along X, Y and Z axes
 - Created a flowchart and function tree to map out system operations and ensure modular design
 - Applied circuit design principles to integrate components effectively, resulting in a functional prototype
- **Automatic Faucet System: Designed and developed an automatic faucet system to conserve water.**
Tools: ARM Cortex-M3 (LPC1768), Keil RTX RTOS, IR Sensor Module, SG90 Servo Motor, 16x2 LCD (4-bit mode), C/C++ 
 - Designed an embedded system utilizing the LPC1768 microcontroller to automate water dispensing based on proximity detection.
 - Integrated an IR sensor module to detect hand presence, triggering the SG90 servo motor for faucet control.
 - Evaluated system performance using RTOS event-driven programming to ensure efficient task synchronization and resource management.
 - Collaborated with peers to develop the system architecture and implemented a 16x2 LCD interface for real-time status display.

SKILLS

- **Programming Languages:** C/C++, Python, Embedded C
- **Technologies:** Arduino, Node.js, NVIDIA Jetson Orin,
- **Tools:** GitHub, Netlify, Keil uVision, VS Code, Cadence Virtuoso

PUBLICATIONS

- **Guitar Chord Recognition: Using Convolutional Neural Network**, ICMISC 2025, Springer *April 2025*
 - * Real-time guitar chord recognition using video input.
 - * Utilized EfficientNet V2 model, a state-of-the-art deep learning architecture.
 - * Combined computer vision and machine learning techniques.
 - * Provides real-time chord recognition for music analysis and automated learning.

EXTRA CURRICULARS

- **Lead Guitarist at Cultural Evening for Freshers**
Performed as the lead guitarist in a full-length concert organized to welcome junior batches
- **Instrumental Judge and Organizer for Music Club Auditions**
Served as a judge for instrumental auditions and actively contributed to event organization and logistics
- **Mentor and Performer at Elegance in Echoes**
Trained rookie club members for a month and supported them on stage as a guitarist during the event
- **Performer at IEEE Conference**
Performed a semi-classical fusion set for delegates at the IEEE conference held on campus

- **College Representative at IIM Bangalore's Unmaad**

Represented KLE Technological University as the lead guitarist of the music team at Unmaad, IIM Bangalore's cultural fest

POSITIONS OF RESPONSIBILITY

- **Instrumental Head**, Music Club, KLE Tech