



KARTHICK RAJ R

B.E. BIOMEDICAL ENGINEER

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TECH SKILLS

- PCB DESIGN
- VLSI
- HTML
- FPGA
- C
- AIML
- PYTHON
- CSS
- DESIGNER
- EMBEDDED C

TOOLS & TECH

- FIGMA
- VIVADO
- ALTIUM
- MATLAB
- KICAD
- ARDUINO IDE
- PROTEUS
- TINKER CAD
- CANVA

CLUB & SOCIETIES

NATIONAL CADET CORPS

INTERNSHIP

COGNIFYZ TECHNOLOGIES

MAY 2025 - JUN 2025

Role : Machine Learning Intern

Mode : Online

CAREER OBJECTIVE

Motivated and detail-oriented Biomedical Engineering student with a strong academic record and a commitment to excellence. Adept at tackling complex assignments, meeting objectives, and continuously expanding knowledge in the field. Eager to gain hands-on experience beyond the classroom to develop foundational skills and contribute effectively to innovative biomedical solutions

EDUCATION

Bannari Amman Institute of Technology

Bachelor Education of Biomedical Engineering

CGPA - 8.21 (Upto 5th Sem) (2022 - 2026)

VHN Higher Secondary School

HSC - **89.83%**

(2021 - 2022)

SSLC - **87.8%**

(2019 - 2020)

PROJECTS

Pulse oximeter

FEB 2023 - MAR 2023

Non-invasive pulse oximeter designed to measure oxygen saturation (SpO₂) levels and heart rate. These are additional parameters I introduced to enhance hypoxemia detection, representing an innovation in pulse oximetry.

Tools & Technology : Arduino IDE & Embedded C

Medical Prescription

OCT 2023 - JAN 2024

The risk of medication errors due to illegible handwriting in medical prescriptions. This longstanding challenge not only endangers patient safety but also disrupts pharmacy workflows and creates uncertainty for patients about their medications.

Tools & Technology : Google Colab, VS code & ML,HTML,CSS

Smart Vision

SEP 2024 - NOV 2024

These technologies enable the system to provide a reliable solution for determining product quantity and verifying color accuracy, thus enhancing the quality control process and ensuring that consignments meet required standards for both quantity and visual attributes.

Tools & Technology : Arduino IDE,Google Colab & ML
Embedded C

AREAS OF INTEREST

- BIOINSTRUMENTATION
- ELECTRONICS
- PCB DESIGNING
- ML & DL
- POSTER DESIGNING
- VLSI
- FPGA

SOFT SKILLS

- MENTORING
- LEADERSHIP
- TEAM WORK
- TIME MANAGEMENT
- ADAPTABILITY
- FOCUS & LISTENING

HOBBIES

- PHYSICAL FITNESS
- SPORTS
- MUSIC
- WATCHING MOVIES
- POSTER MAKING

LANGUAGES

- ENGLISH - R,W,S
- TAMIL - R,W,S
- HINDI - R

CERTIFICATIONS

- BASIC PCB DESIGN COURSE
Altium SEP 2024
- EXCEL FOR BEGINNERS
Great Learnings NOV 2024
- PYTHON FOR DATA SCIENCE
Cognitive Class JUN 2025

Non-Invasive Blood Pressure Monitoring System

OCT 2024 - DEC 2024

Developed a contactless, high-accuracy BP monitoring system leveraging photoplethysmography (PPG) for continuous measurement. Designed an intuitive, user-friendly interface for accessibility across all age groups.

Tools & Technology : Arduino IDE, Google Colab & ML Embedded C

AI-Driven Multi-Disease Health Prediction System

JAN 2025 - MAR 2025

YOUR CARE – AI Personal Healthcare Assistant emerges as a transformative solution, leveraging the power of AI to bridge the critical gaps in diagnosis, treatment guidance, and medical assistance

Tools & Technology : Python, Deep learning, Machine learning, Google Colab & VS Code

CNN ACCELERATOR IMPLEMENTATION ON PYNQ-Z2 USING VIVADO

MAR 2025 - PRESENT

Implemented a CNN accelerator on the PYNQ-Z2 board using Vivado for efficient image processing. Designed custom hardware architecture for convolution operations with optimized resource utilization.

Tools & Technology : Verilog, Python, Vivado

ACHEIVEMENTS

NCC

APR 2024 - JUL 2024

I attended TSC-IGC 2024, one of the greatest achievements in my NCC journey.

PAPER PRESENTATION

- International E-Conference on Emerging Trends in Education, Research and Innovation

OCT 2024

PROJECT

- BIT Hack's Finalist
- PEC Hack's Finalist
- Flipkart 6.0 shortlisted for round 2

DECLARATION

I **Karthick Raj R**, here by declare that all the details provided above are true to the best of my Knowledge.