DEV PATEL

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EDUCATION
University of California, Riverside (UCR)
Master of Science in Electrical and Electronics Engineering   Mar 2025

ABC College of Engineering, City, India
Bachelor of Engineering in Electronics and Communication Engineering   Jun 2022

TECHNICAL SKILLS
Programming: C/C++, Python, MATLAB, OpenCV, Git, CUDA
Embedded Systems: Raspberry Pi, Arduino, MSP430, NXP Freedom Board
Operating Systems: Linux, Zephyr RTOS, FreeRTOS
Protocols: I2C, SPI, UART, BLE
Software: Keil, Proteus, Visual Studio, AutoCAD

ELECTRICAL ENGINEERING EXPERIENCE & PROJECTS
Zephyr RTOS Driver Development, XXXX Course, UCR   Mar 2024 - Present
- Developing 3 sets of drivers on Zephyr RTOS platform for Adafruit board by reading datasheets for different sensors
- Utilizing sustainable energy such as solar to power the intermittently powered device using PMIC chips and super capacitors

Graduate Student Researcher, Dept. of Elec. Engineering, UCR   April 2023 – Oct 2023
- Developed algorithms in MATLAB to solve Linear Optimization Problems
- Designed 3D Drawings on AutoCAD software to assist in grant proposals
- Assisted professor with modeling and data analysis for research papers

Drowsiness Detection System, XXXXX Course, UCR   Jan 2023 - May 2023
- Designed and implemented drowsiness detection system on Raspberry Pi using OpenCV and Python, reducing potential accidents by 20%
- Integrated camera module with Raspberry Pi and configured OpenCV for image processing
- Developed algorithm to detect driver's eyes and trigger alarm when eyes closed for extended time

Linux Kernel Development, XXXX Course, UCR   Sep 2022 - Dec 2023
- Developed custom Linux kernel system calls for task scheduling and memory monitoring using high resolution timer
- Implemented system calls to understand memory management in Linux kernel
- Enhanced multi-tasking capabilities by modifying scheduler policy

Research Intern, Indian Space Research Organization, India   Jan 2021 – May 2022
- Compiled and analyzed satellite image data using ENVI and PolSARPro
- Filtered regions of interest from satellite data for land classification
- Used RISAT-1 data to explore properties of different terrains in India

Reverse Vending Machine Project, Techmark8, Kuala Lumpur, Malaysia   June 2020- Aug 2020
- Created GUI with Python for reverse vending machine deployed in Malaysia
- Collaborated with engineers to develop overall design and software
- Integrated RFID module for enhanced security features

CAMPUS INVOLVEMENT
Member, IEEE, UCR Chapter   Oct 2023 – Present
Member, International Student Union, UCR   Sep 2023 - Present