AKHIL CHERUKURI

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TECHNICAL SKILLS

Programming Languages: C, C++, Embedded C, Python
Operating Systems: Linux (Ubuntu, ROS), Real-Time OS (FreeRTOS, Amazon FreeRTOS)
Platforms: LPC 4078, LPC 1769, ESP32, Raspberry Pi, Nvidia Jetson
Technologies and Protocols: GPIO, SPI, I2C, UART, CAN, ADC, PWM, Bluetooth
Tools and Debugging: Eclipse, Visual Studio Code, Git, CMock, MATLAB, NXP MCUXpresso, Keil µVision, Putty, TeraTerm, Arduino, Logic Analyzer, GDB, PCAN.
Also have nominal experience in Shell Scripting, Java, Agile Methodologies, Test Driven Development (T.D.D).

EDUCATION

Master of Science, Computer Engineering **July 2021(Expected)**
San Jose State University, San Jose, California **3.55/4**
Courses: Embedded Software, Embedded Hardware Design, Embedded System Applications, Advanced Computer Design, System Software, Operating Systems, Computer Architecture, Object-Oriented Programming Data Structures and Algorithms (C++), Internet of Things

Bachelor of Technology, Electronics and Communication **July 2019**
Jawaharlal Nehru Technological University, Hyderabad, India **3.60/4**
Courses: Embedded Systems Design, Microcontrollers, Objected Oriented Programming (Java), VLSI Design, Operating Systems, Computer Networks, Digital Electronics, Analog Electronics, Electronic Circuit Analysis, Computer Architecture and Organization, Wireless Communication and Networks.

EXPERIENCE

Embedded Systems Intern, Orange System Labs Hyderabad, India **December 2018**
- Worked on ESP32 microcontroller connected to Google Firebase cloud system.
- Created a home automation system that connected various sensors and programmable via Android application.

Electrical Intern, Bharat Heavy Electricals Limited Hyderabad, India **December 2017**
- Designed compact multi-layer PCBs schematics for industrial equipment using cadence virtuoso software.
- Printed PCBs and Soldered required components for specific equipment.

ACADEMIC PROJECTS

Autonomous RC Car, San Jose State University **Spring 2020**
- Hardware / Technologies: SJSU-Dev Board (ARM Cortex-M4 based NXP LPC4078), HC-05 Bluetooth Module, SN65HVD230 CAN Bus Transceiver, LiDAR, and ultrasonic sensors, GPS module, FreeRTOS, CMock for Unit Testing, EAGLE PCB Designer, CAN, UART
- Implemented a self-navigating vehicle with obstacle avoidance and shortest path algorithms to reach a destination selected via a Bluetooth app.

2D and 3D Graphic Rendering using Transformation, San Jose State University **Fall 2019**
- Hardware / Technologies: MCUXpresso LPX1769(ARM Cortex-M3 based NXP LPC1769), SPI, 120x160 TFT
- Designing 2D based Live screensaver, executed using Transformational algorithms to computer object's perspectives and reflection gradients.

Ordnance Disposal Rover, Jawaharlal Nehru Technological University **April 2019**
- Hardware / Technologies: Raspberry Pi 3 Model B, Apache, H-Bridge L298, PiCam
- The rover uses a Raspberry Pi 3 Model B with a local Apache HTTP Server for user end control application and achieved communication via 802.11g to control the robot remotely.
- Implemented PWM for 3-way servo motor arm movement and H-Bridge L298 for wheel motor movement and live camera feed using Python Language.