

Dhiraj Bennadi

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EDUCATION

University of Colorado Boulder: M.S, Embedded Systems and Internet of Things	Boulder, CO
Coursework: Embedded System Design, Principles of Embedded Software	Aug 2021 – May 2023
KLS Gogte Institute of Technology: B.E, Electronics and Communication	Karnataka, India
Coursework: Microcontrollers and Microprocessors, Logic Design, Verilog and VHDL	Aug 2013 – July 2017

PROFESSIONAL EXPERIENCE

Graduate Teaching Assistant	Aug 2021 - Present
<ul style="list-style-type: none">Conducted Lab Sessions on Sensors and MotorsHeld Office hours to provide support to students on Assignment and Homework materialGraded course work and Lab reports and provided individual feedback	
Bosch Global Software Technologies: Software Developer	Jan 2021 – July 2021
<ul style="list-style-type: none">Developed Software in C, C++ for Advanced Driver Assistance Features (Automated Parking and Lane Monitoring)Configured Basic Software (BSW) Layers for SPI, EthernetResolved Customer Issues for High Speed UART	
KPIT: Software Developer	Oct 2017 – Dec 2020
<ul style="list-style-type: none">Developed software in C, C++ for Electric Vehicles and Charging Stations based on ISO-15118Configured Microcontroller Abstraction (MCAL) and ECU Abstraction Layer for EthernetDeveloped Complex Device Drivers for Combined Charging SystemDeveloped software to boot Qualcomm QCA7005 Powerline communication chip from Host MicrocontrollerAutomated Build process using make files, Python, and batch scripts for handling 12 modulesImplemented Powerline communication using SLAC protocol on MPC5748G and Renesas RH850	

ACADEMIC PROJECTS

Remote Communication with 8051
<ul style="list-style-type: none">Designed a system to transfer binary files remotely for flashing 8051 using ESP32 Wi-Fi moduleImplemented UART protocol to access the bootloader of 8051 and facilitate communication between the host microcontroller (MSP432401R) and 8051Developed a utility in Python to allow user to select binaries and set the IP and port address.
Secure Communication on FRDM-KL25Z
<ul style="list-style-type: none">Implemented secure communication using AES cryptographic algorithmImplemented SPI driver to transfer encrypted data
Interactive Car Environment (Proposal)
<ul style="list-style-type: none">Proposed a system to keep track of car's health by monitoring fuel, battery, and engine statusThe Proposal was selected among the Top 10 proposals in an event, STARTUP Karnataka held in Bangalore, India (>300)

SKILLS

Programming Languages	Embedded C, C++, Python, Bash Scripting, Assembly
Tools and Technologies	S32 Design Studio, Kiel uVision, Multi IDE, GCC, CANoe, C4K, DaVinci, MCU Xpresso, TI CCS, MPC5748G, Renesas RH850, ARM Cortex M3 (STM32F100RBT6B), ARM Cortex M0 (KL25Z), TI MSP432, Raspberry Pi, Git, Tortoise SVN, CMake, Oscilloscope, Logic Analyzer
Communication Protocols	SPI, UART, Ethernet, CAN, I2C

AWARDS

- Received "Outstanding Performer" award for performance in Genesis Program (>150)
- Received Highflyers award for excellent contribution in Vehicle to Grid project development