Harish Kumar **Shivaramappa**

Electronics and Computer Science | Engineer

About me

I am a highly competent Electronics and Computer Science professional with a proven track record in Hardware, Software and hands-on **experience in electronics and computer science for 3+ years**. I have multi-disciplinary work experience and excellent interpersonal skills, enabling me to interact with a wide spectrum of clients and teams. I am eager to be challenged to grow and further improve my Electronics and Computer Science skills. The greatest passion in my life is to use my knowledge to benefit people and organizations. *My commitment to work is my Bond.*

Contact

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Languages

- English - Professional
- Italian - Intermediate

💼 WORK EXPERIENCE

Feb/2022 - Ongoing

Application Engineer ⚲ Pavia, Italy
Inventvm Semiconductor S.R.L
A One-year full-time "**wireless communication Active Balancing BMS for EVs**" thesis program conducted in the company. The responsibilities included owning complete project implementation in terms of hardware and software. The institution offered me more international exposure through project demos, which included developing GUI for BMS applications (**PyQt, HTML, CSS, JS..**), PCB designing (**CMU, MMU, BLE modules**), embedded script(**C**) for microcontrollers/ Bluetooth, and developing the interface drivers(**Python,LabView**) for Lab instruments.

Jan/2019 - June/2020

IoT Hardware Application Engineer ⚲ Banglore, India
Analog Devices Inc
The job is to understand hardware design methodologies and software according to the customer's requirements. ADI is an estimated institution that offered me an opportunity to handle several projects over a period. I can recall a few notable projects from the organization, **CBM** (Condition-based Monitoring) for windmills, **Burnside California state forest wildfire protection** with IoT application, Developing the python-based test bench for wireless product evaluation, and supporting post silicon evaluation for **WBMS(wireless BMS) chips**. Daily tasks include resolving customer queries related to wireless network hardware from **China and the European region.**

Feb/2018 - Sept/2018

Hardware Engineer ⚲ Banglore, India
𝒩 exxt Gen... Computers
The institution is familiar with the computer-based application, and my responsibilities are leading the hardware team and coming up with challenging computer hardware configurations. Over a period with skilled people improved my intellectual knowledge in analyzing closed loop **SMPS(onboard power and external power supplies) and micro-chip/components circuits from laptops/ pc.**

Feb/2013 - Aug/2016

Servicing Engineer ⚲ Banglore, India
Radio Technical House
The organization is service-based for consumers and industrial electrical and electronics items. my role in the organization is to provide repair service for **LCD/LED TVs, audio power amplifiers, single/three phase ups inverters...etc**. Since the industry is consumer/Industrial product service-based, it offered me an opportunity to *interact with customers and improve the quality of the service.*

🎓 EDUCATION

Sept/2020 - Dec/2022

Masters of Science Degree ⚲ Pavia, Italy
Micro Electronics
University of Pavia
Imp Subjects: Analog Design, Inetegrated Power Management,RF and Microwaves, analog & digital VLSI interface ckts

Mar/2016 - Aug/2019

Bachelor of Science Degree ⚲ Banglore, India
Electronics and Communication Engineering
PES University
VLSI,Itegrated Semiconductor Devices,AI & ML
Degree CGPA: 8/10

Mar/2013 - Mar/2016

Diploma ⚲ Banglore, India
Electronics and Communication Engineering
SJP Politechnic
Instrumentation, PCB milling CNC machines..
Degree CGPA: 9/10

</> PROGRAMMING LANGUAGES

- **Python:**Highly Specialised
- **Matlab:**Intermediate
- **Qt/tkInter/Node Red:**Advanced
- **Embedded C:**Advanced
- **LabView:**Advanced

🔗 PCB Designing

- **OrCAD/Allegro:**Advanced
- **PAD's:**Advanced

Modeling and Simulation

- **Caddence:**Specialised
- **Simulink:**Intermediate
- **LTSpice:**Intermediate

🗄 Data Analysis

- **Pandas:**Advanced
- **JupiterNoteBook:**Advanced
- **SCI Lab:**Intermediate

✎ Documentation

- **ETEX:**Advanced
- **Beamer:**Intermediate
- **Power BI:**Intermediate

Professional Skills

| Excellent Soldering | Calibrating Instruments |

| Circuit Debugging | Problem Statement Narration |

| Financial Analysis | Fast Coding |

Other Interests

- Temples 🏰
- Treking 🏃
- Chess ♟
- Finance 💰
- Travels 🧭
- Movies 🎥
- Books 📚

Soft Skills and Strengths

| Creativity | Curiosity | Flexibility |

| Self Confidence | Ability to Plan and Organize |

| Autonomy | Adaptability | Eye for Details |

| Problem Solving | Team Working |

| Love Learning New Things | Leadership |

| Good Communication | Managing Information |

| Diplomacy | Good Listener | Patience |

Download My CV

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📖 THESIS/PUBLICATIONS

Masters Thesis Feb/2022 - Dec/2022	**Wireless Communication BMS for EV**, Determining the SOC ad SOH of the Li-Ion batteries by employing the Conventional Coloumb count method and sophisticated Kalman filter algorithms(UKF,EKF,AUKF and AI/ML) in a wireless communication network(BLE)., , 🔵
Batchelors Thesis Jan/2019 - Aug/2019	**Robotic Arm Control Using Haptic Glove**, via a Haptic Glove is a system by which a user can control a remotely placed robotic arm via the haptic glove controller. , , 🔵
Diploma Thesis sept/2015 - April/2016	**3 Axis CNC PCB Milling Machine**, The objective is to build a low-cost high precision(3mm) 3-axis PCB milling machine, which can support manual and advanced G-code., , 🔵

🖥 Notable Professional Projects

Inventvm Semiconductor S.R.L	**WBMS**: *WBMS project in Inventvm is also my thesis theme, and the work is carried out on the research level to develop the wireless environment LIPO batteries active balancing for EVs BMS using a hybrid buck-boost converter.*
Analog Devices Inc	**CBM**: *One of my significant projects in ADI is CBM (Condition-based monitoring) for windmills, which includes monitoring vibration data, the temperature of the core, and the tilt angle of the wind turbine using IoT sensors.* **WBMS**: *The WBMS project in ADI is one of the breakthrough projects in my carrier. I have actively participated in this project to bring up the WBMS chip, which includes the proprietary IoT stack and specific core for BMS applications. Evaluation of this chip is quite challenging because of the multi-disciplinary functions in the chip. Thanks to the ADI application team, who helped me to bring up the most robust python-based test bench for product evaluation.*
Nexxt Gen... Computers	**ESR/ESL Meter**: *Ripple/ringing in power supply circuits is not uncommon, which can be caused by the series resistance of the inductors and capacitors. This instrument is essential for Service engineers/application engineers to detect the resistance of inductors and capacitors. ESR/ESL meter can also be used to check the quality of the PCB tracks.*
Radio Technical House	**Transformer Less Inverter**: *The 500Watts square wave Inverter is designed, with the principle of boosting 12V (battery) to 230V/440V DC using a chopper and transforming high voltage to the square wave AC with the help of an H-bridge at the output. Voltage and Current loops(kelvin/shunt current sense) are employed to maintain the DC/DC converter stability.*

❀ CERTIFICATES

- **ADI**, Best Employee of the year -2019
- **Diploma**, Best Outgoing Technical Rookie of the Department - 2016
- **School**, State-level Debate Competition(Human Rights) winner -2012