



# Shashidhar Akhil Aithal

## Electrical Engineer

Electrical Engineer driven by hands-on hardware innovation and complex problem solving. With more than four years of professional experience, I specialize in **circuit and PCB design, laboratory instrumentation** and embedded programming (**C/C++ and Python**). I thrive in challenging environments that demand conceptual thinking, rapid prototyping and continuous learning - especially where technology shapes the future.

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## WORK EXPERIENCE

### Research Assistant

Institute of Robust Power Semiconductor Systems (ILH)  
01/2025 - 03/2025  
*Stuttgart, Germany*

- Performed **RF and microwave port simulations** using **Keysight EMPro** to analyze electromagnetic behavior of high-frequency structures
- Supported **design validation and performance evaluation** through simulation-driven insights
- Contributed to **research-grade modeling workflows**, improving confidence in early-stage hardware designs

## SKILLS

- PCB Design
- Circuit Design
- Circuit Simulation
- Hardware Prototyping
- Hardware Validation
- Laboratory Testing
- C/C++
- Python
- Worst-Case Analysis
- RF
- Soldering
- Requirements Engineering
- Test Automation

### Working Student – Hardware & System Architecture

Robert Bosch GmbH  
12/2022 - 12/2024  
*Stuttgart / Abstatt, Germany*

- Supported **radar and next-generation automotive system development**, contributing across **hardware engineering and system architecture** activities
- Created and maintained **hardware and system requirements with end-to-end traceability** using **IBM DOORS**, ensuring alignment between design and system specifications
- Provided **hands-on laboratory support**, including **test sample preparation, validation, debugging, and circuit board bring-up**
- Automated **data extraction, analysis, and reporting** using **Python and Splunk**, reducing manual effort and improving engineering insight
- Coordinated **issue tracking, sprint planning, and cross-functional collaboration** via **JIRA**, supporting efficient system integration

### Hardware Design Engineer

Bosch Global Software Technologies Pvt. Ltd.  
01/2021 - 09/2022  
*Bangalore, India*

- Designed and developed **electronic modules for Fuel Cell Electric Vehicle (FCEV) applications**, including **Interlock systems, Low-Voltage DC-DC converters, CAN interfaces, and crash signal circuits**
- Executed **end-to-end hardware development**, covering **circuit design, simulation, schematic review, and hardware testing**
- Automated **test workflows using Python** and enhanced reporting efficiency through **VBA scripting**, improving test repeatability and documentation quality
- Owned **module lifecycle management**, including technical documentation, design reviews, and cross-team coordination
- Led **component procurement and traceability**, contributing to improved cost efficiency and supply-chain visibility

## ACHIEVEMENTS

### Hackathon Winner – “Two-Wheeler Overtake Assist”

Awarded for developing an **innovative safety-focused concept** addressing real-world riding scenarios through technical problem-solving.

### Department Excellence Award

Recognized for delivering **exceptional project value** through high-impact technical contributions.

### Extra Miler Award

Awarded for introducing **test automation** and proactively coordinating **component procurement**, improving efficiency and delivery timelines.

## CERTIFICATES

Altium - PCB Design Course

Nordic Semiconductor - Bluetooth Low Energy Fundamentals

Nordic Semiconductor - nRF Connect SDK Intermediate

## LANGUAGES

### English

*Native or Bilingual Proficiency*

### German

*Professional Working Proficiency*

### Hindi

*Professional Working Proficiency*

### Kannada

*Native or Bilingual Proficiency*

## EDUCATION

### Master of Science in Electrical Engineering

University of Stuttgart

10/2022 - 03/2025

*Stuttgart, Germany*

### Bachelor of Engineering in Electronics and Instrumentation

B.M.S. College of Engineering

08/2016 - 08/2018

*Bangalore, India*

## INTERESTS

- Travelling
- Volunteering
- Sports
- Technology