

RAVI KUMAR DUSI

Electronics Engineer

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📍 Langeoog, Germany

🌐 Ravi Dusi



WORK EXPERIENCE

Werkstudent Electronics & EMC Engineer

Denpaflux GmbH

📅 Sept 2023 – Sept 2024

📍 Munich

- Designed & simulated PCBs (**Analog/Digital circuits, DC-DC converters, Filters**) using Altium Designer, Implementing EMC rules and layout optimization
- Developed DC-DC buck-boost converters, AC-DC converters, and Sallen-Key filter PCBs, fabricated prototypes, and correlated results between Theory, Simulation, and Lab measurements
- Performed **Signal Integrity / Power Integrity analysis**, controlled impedance routing, and applied IPC/IEC guidelines for high-speed interfaces in my Masters Thesis
- Managed CAD Component Library (symbols, footprints, BOM library) and generated ODB++ and manufacturing documentation for EMC report & Production
- Hands on experience handling electronics lab instruments such as Oscilloscopes, Multimeter, and Vector Network Analyzers, Soldering, Testing

Werkstudent Electronics Engineer

Konux GmbH

📅 Jan 2023 – July 2023

📍 Munich

- Designed a multi-layer test bench system consists of embedded electronics right from conceptualization to production, and assisted in python scripting
- Validated microcontroller-based PCBs for railway monitoring systems, component selection, and circuit dimensioning
- Maintained CAD library (footprints, parametric data alignment) to support design-to-manufacture consistency, version control in GitHub/Altium workspace
- Testing of the developed hardware units in the laboratory by Performing soldering, modifying measurement box and cables, optimizing hardware, PCB Assembly, Circuit Prototyping, Debugging, supported lab validation and lab automation

Intern Hardware Development

Rocket Factory Augsburg

📅 Sept 2022 – Dec 2022

📍 Augsburg

- Reviewed schematics of Power Distribution Units(PDU)
- Simulation and testing of the developed PDUs in the laboratory
- Assistance in Generated technical documentation & test reports, Also maintaining documentation

SUMMARY

Hochschule Bremen Graduate with a Master's degree in Electronics, specialized in Microsystems Engineering, and a Bachelor's degree in Electronics & Communication Engineering. Experience in Hardware Design & Development right from conceptualization to production along with validation. Fluent in English (C2) and basic German (A2). Currently seeking a full-time position, willing to relocate, and available to start immediately.

SKILLS

- **Hardware Development:** Analog-mixed signal circuits, ADC, SI/PI Analysis, Simulation-testing, **EMC fundamentals**, Filters.
- **Power Electronic:** DC-DC converters(Buck, Boost), AC-DC Converters, Power distribution, filters, Grounding, Low Power Design, EMC/ESD compliance.
- **PCB-ECAD & Libraries:** Altium Designer, KiCAD, **EMC-aware layout**, Multi-layer, Component selection, PCB Manufacturing.
- **Simulation & Programming:** LTSpice simulation, Power & Noise Management, SI/PI analysis, Basic Python & Matlab for data analysis & Lab Automation, knowledge of micro controllers.
- **LAB Testing & Validation:** Soldering (THT /SMD), EMC testing, Lab Equipments such as Oscilloscope, Multimeters & VNA, Analyzer, Validation.
- **Failure Analysis & prototyping:** Identification of root causes, Rework, repair of PCB assemblies, Debugging & Prototyping.
- **Communication Protocols:** CAN, USB, SPI, I2C, High Speed Serial Interfaces, SerDes Knowledge.
- **Compliance & Standards:** EMC/ESD compliance, IEC 61000-4, IPC 2141A, IPC 2221.
- **Documentation :** Technical documentation, DFM,DFT,Test report, MS Office, Github.

EDUCATION

M.Sc Electronics Engineering: MEMS

Hochschule Bremen, Bremen, Germany

📅 (09/2021 – 09/2024)

- Master Thesis : Best practices in Electronics Design. Unveiling myths of common Practices.
 - Subjects:Material Science, Micro-technology & Micro-structuring, Analog & Mixed Circuit Design, Concept Engineering of Mixed Technology, Satellite Communication systems.
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B.E. Electronics & Communication Engineering

Sathyabama University, Chennai, India

📅 (06/2016 – 03/2020)

- Bachelor Thesis : Design and Development of Unmanned Aerial vehicle for plant disease detection and diagnosis.
- Subjects: Electronic circuits, Electrical network, Control systems, C/C++ programming, Communication systems, Microprocessor, Digital Signal Processing.

LANGUAGES

English

German



Personal skills

Analytical thinking & Quick learner

Problem solving & Presentation skills

Hobbies

PCB designing- personal projects

projects with sensors, BLDC motors

Archery

sports & story writing
