

CURRICULUM VITAE

PERSONAL DATA

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EDUCATIONAL QUALIFICATION

Masters M.Eng. in Electrical Engineering and Embedded Systems
09/2016 – 03/2018 (Expected)

Bachelors B.Tech. in Electronics and Instrumentation Engineering
06/2011 – 05/2015

WORK EXPERIENCE

08/2017 – present **Master's Thesis** Technical University of Munich
Munich, Deutschland.

Title **Hardware Circuit Design for a TDLAS Measurement system**

Skills and Responsibilities

To design a PCB hardware circuit for a Tunable Diode Laser Absorption Spectroscopy (TDLAS) between the experimental components (Laser Diode, Photo Diode) and the computer. The functions of the PCB would include:

- Laser and Photo Diode controllers, which are the TEC drivers to keep the the laser and PD at exact temperature.
- P & T sensors: set pressure and temperature sensors in the system, and send the P, T values into the data processing.
- Signal generator: which is used to tune the laser wavelength, and modulate it using the high frequency sine signal.
- Data acquisition: collect the data from the PD and signal generator, send them to the lock-in system in the computer (we have made the lock in system and gas concentration calculation software, some modification may be made to suit the PCB).

08/2015 – 07/2016 **Electronics and Flight Control Engineer** Skylark Drones Pvt. Ltd
Bengaluru, India.

Skills and Responsibilities

- Integrating and Monitoring electronic sensors on drones.
 - Programming and fetching live feed telemetry from the drones during operation.
 - Manual Piloting and controlling autonomous navigation of drones for aerial surveillance.
 - R&D for different types of Controllers and PID tuning for both fixed wing and Multi-rotor type drones.
 - Programming Flight Controller for in-flight operations and recovering the fetched telemetry for post processing.
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10/2016 – 02/2017	System On Chip Designer (Work Student)	HS-Ravensburg Weingarten Weingarten, Deutschland.
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Skills and Responsibilities

- Designed an 8-Bit Tester Chip and Port Expander PCB using EAGLE CAD.
- Developed VHDL program along with Test Bench for simulating the Tester Chip as it would on a XILINX FPGA.
- Presently working on Development of 8051 Microcontroller using VHDL.
- Realizing Oregano VHDL code of MC8051 into SystemC.

10/2016 – 07/2017	Embedded Computing Engineer	HS-Ravensburg Weingarten Weingarten, Deutschland.
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Skills and Responsibilities

- Learnt the architectures of different types of Embedded Systems.
- Programmed Raspberry Pi using OpenCV image Processing to read the distance of an object from the RaspiCam by detecting a QR code attached on the object using Embedded C language.

10/2016 – 07/2017	Student Assistant	Signal Processing Lab HS-Ravensburg Weingarten Weingarten, Deutschland.
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Skills and Responsibilities

- Acquired knowledge on designing Analog and Digital Filters for various applications.
- Integrating modern day technologies with Digital Signal Processing Algorithms.
- Realized various complicated Signal Processing circuits using PicoScope and Matlab.
- Helping the R&D department by testing various DSP and Communication Systems.
- Designed various Higher Order Filters and implemented them using the Arduino Due Microcontroller.

11/2016 – 12/2016	Software Developer (Work Student)	Boehringer Ingelheim Pharma GmbH & Co. KG Biberach, Deutschland.
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Skills and Responsibilities

- Successfully presented our team's idea and won first place at the Boehringer eHealth Hackathon.
- Developed a Raspberry Pi based eHealth monitoring system to record and simultaneously upload the feed values from different health sensors such as Blood Pressure, Temperature, Sugar level sensor, etc. to the cloud.

EDUCATION AND TRAINING

Dates	09/2016 – 03/2018 (Expected).	
Qualification	Master of Engineering in Electrical Engineering and Embedded Systems.	
Organization	Hochschule Ravensburg Weingarten, 88250, Weingarten, Deutschland.	
Principle Subjects	<ul style="list-style-type: none">➤ Advanced Mathematics➤ Signal Processing➤ Telecommunication Technology➤ Embedded Computing➤ System on Chip➤ Embedded Control	<p>Skills: - MATLAB, GNU OCTAVE</p> <p>Skills: - MATLAB and Picoscope</p> <p>Skills: - Cadence OrCAD, PSpice</p> <p>Skills: - C/C++, Raspberry Pi & Arduino</p> <p>Skills: - EAGLE, VHDL</p> <p>Skills: - MATLAB, Control Systems</p>

Dates 07/2011 – 05/2015
 Qualification **Bachelor of Technology in Electronics and Instrumentation Engineering.**
 Organization SRM University, 603203, Chennai, India.
 Principle Subjects VLSI Design and Embedded Systems, Virtual Instrumentation, Communication Technology, Advanced Engineering Mathematics, Control Systems, Digital Systems, Digital Signal Processing, Microprocessors and Microcontrollers, Digital System Design, Power Electronics, Electrical Machines, Engineering Mechanics, Electrical Measurement and Instrumentation, Computer Systems.
 Bachelor Project **Smart Glass:** Holographic Projection and gesture control of Computer.

PERSONAL DETAILS

Mother Tongue Tamil, Hindi
 Other Languages

	UNDERSTANDING		SPEAKING		WRITING
English	C2	C2	C2	C2	C2
Test of English as Foreign Language (TOEFL)					
German	B1	B1	B2	B2	B1
Language Centre (HS-Ravensburg Weingarten, University of Applied Sciences)					

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

Communication Skills Good communication skills (English and German) gained through: -
 ▪ Conducted workshops and participated in different Seminars and Technical Talks in the University.
 ▪ Member of the National Service Scheme (NSS) in India providing free services and education to the underprivileged and developing States.

Organizational Skills
 ▪ Good Team Player, Public, Team Leadership, Motivator.
 ▪ Organized and hosted a National Level Techno-Fest in my bachelor University.

Job-related Skills
 ▪ MATLAB/ Simulink, C/C++, Algorithm Implementation, VHDL, LINUX, LabVIEW, Python.
 ▪ Huge Interest and Strong Knowledge in Signal Processing and Communication Systems.
 ▪ Strong Knowledge on Advanced Engineering Mathematics.
 ▪ Strong interest towards programming in Matlab, C/C++, Python.
 ▪ Strong Experience with different microcontrollers such as Arduino, Raspberry Pi, Beaglebone and Sensor Technology.
 ▪ Was the Control and Power Systems Domain head of the Bachelor University's UAV-Drone team.

Courses

EAGLE, VHDL, MATLAB, LabVIEW, GNU OCTAVE

Certifications

- Certificate of Participation in the Annual CanSat Competition, 2014, Organized by AIAA and NASA, Abilene, Texas, USA.
- Certified LabVIEW Associate Developer (CLAD)

References

Available upon request.
