

Saptarshi Hazra

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I am an optimistic, open-minded, innovative, goal-driven individual currently writing my Master Thesis on 'Characterization and mitigation of timing delays in Software Defined Radio Platforms' as RISE ICT. I am interested in the design and development of networked embedded systems.

Work Experience

- Fraunhofer FOKUS**
Student Assistant, NGNI Group

Berlin
March 2017–July 2017

I was responsible for developing scripts(Bash, Python) for automatic deployment of 5G components on VMWare. I also worked on development of auto-reconfiguration tool for reconfiguration of network interfaces and PLMN reconfiguration

Tools and Skills: VMware, Shell Scripting, Linux network tools, init.d, Python, MySQL, Wireshark.
- Airfy GmbH**
Embedded Firmware Developer

Berlin
November 2016 – December 2016

I worked on development of UART based PWM LED driver on nRF51822. I was responsible for development of test firmware for LoRaWAN and BLE so that it complies with *ERC-REC 70-03*

Tools and Skills: nRF51 SDK, Embedded C, LoRaWAN, UART, PWM, Makefile.
- Indian Institute of Remote Sensing, ISRO**
Research Intern, Geoinformatics Department

Dehradun, India
June 2015 – July 2015

I worked on developing mathematical model of RADARSAT-2 SAR mainly using vector algebra, fast Fourier transforms and electromagnetic Waves at dielectric boundaries model. Implemented the model in R.

Tools and Skills: Digital Signal Processing, RF Signal Processing, Vector Algebra, R.
- Distronix**
Embedded Firmware Developer

Kolkata, India
June 2014 – July 2014

I was responsible for development of firmware for rotary-encoder based controller and SPI Controller for the gateway node. The project was implemented as IOT based assembly line system at a corrugation factory.

Tools and Skills: C, Atmega328, Atmel Studio.

Education and Training

Academic Qualifications.....

- Technical University Berlin, KTH Royal Institute of Technology**
EIT Digital Masters in Embedded Systems

Berlin, Stockholm
2016 – 2018

Course Work: Digital Design using HDL, Embedded Hardware Design in FPGA/ASIC, Many Core Architecture, Advanced Computer Architecture, Applied Embedded Systems Project, Compiler Design, Quality Assurance of Embedded Systems, Dependable Systems, Embedded Systems Security Lab.
- West Bengal University of Technology**
Bachelor of Technology in Electronics and Communication Engineering

Kolkata, India
2012 – 2016

Course Work: Analog and Digital Electronics, Analog and Digital Communication, C, C++, Data Structure, EM Waves and RF.

DGPA : 8.98/10.0

BSNL

CTTC, Kolkata, India

○ **EETP Training**

2014 – 2015

128 hours training on Optical Fiber Technology, Broadband Technology, Digital Switching System, Digital Transmission System, Telecom Support Infrastructure.

Projects.....

1. Characterization and Mitigation of timing delays in Software Defined Radios **January, 2018-present**
2. Image Topology Extraction using Zedboard. **March 2017 – July 2017**
3. Fuzzy logic based cluster head detection for heterogeneous clustered WSN **August 2017 – January 2018**
4. ROS Based SLAM implementation. **August 2015 – June 2016**
5. Bluetooth and GSM Based Home Automation System. **September 2014 – January 2015**
6. Ideation and Business Model Development of Innovative Business Idea for toy industry. **March 2017 – July 2017**
7. Ideation and Development of Online Platform for collaboration between startups and big corporations. **October 2016 – January 2017**

Conference Publications:.....

1. "RADARSAT-2 SAR Simulation" presented at 11th International Conference of Microwave, Antenna, Propagation and Remote sensing.
2. "Design and Analysis of Rectangular Dielectric Resonator Antenna for Wireless Application", DOI: 10.1109/IEM-CON.2015.7344506.

Technical and Personal skills

Technical Skills.....

- **Programming Languages:** C, C++, VHDL, MATLAB, Python, R.
- **Application Software:** Quartus, Vivado, Modelsim, NCSim, GNU Radio, Innovus, Design Vision, MATLAB, Arduino, Atmel Studio, OpenCV, MS Word, MS PowerPoint, Processing, Multisim.
- **Hardware:** Arduino, AVR Microcontrollers, nRF51822, Zedboard, Altera DE2.
- **OS:** Linux(Ubuntu), Windows.

Organizational / Managerial skills.....

- **Leadership Skills:**
 - Acted as "Student Mentor" of my college entrepreneurial and research lab.
 - Acted as the college entrepreneurship cell R&D Manager. The college team has won the NEN Entrepreneurship Week *Premier Awards* 3 times.
- **Organizational skills:** Integral part of the college technological fest "Innovacion" organization team.

Honors and Awards

1. Winner of EIT Summer School on Decentralized Production in Munich.
2. Winner of best presentation of Venture Campus Course at TU Berlin.
3. Received EIT Merit Scholarship, 2016-2018.
4. Received research grant from Innovation and Entrepreneurship Development Center, Govt. of India, August, 2014.
5. Presented with the Student Performance Award, 2015 and 2014.