



# SANDIPAN DAS

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## ⚙ Skills

### Professional Skills

#### SIMULATION TOOLS

CST EM studio ★★★★★  
MATLAB ★★★★★

#### HARDWARE

PCB design ★★★★★  
Aduino, RPi ★★★★★

#### PROGRAMMING

JAVA/J2EE ★★★★★  
C# ★★★★★  
C ★★★★★  
Python ★★★★★  
Node.js ★★★★★  
Jquery ★★★★★  
HTML5 ★★★★★  
Android ★★★★★  
SQL ★★★★★

#### OTHERS

MS Office ★★★★★  
LATEX ★★★★★  
InDesign ★★★★★  
Illustrator ★★★★★

### Personal Skills

Team Player, Proactive, Organized, Management skills, Adaptive, Interpersonal skills

## 🏆 Awards

NordSecMob scholarship  
EUROPEAN COMMISSION 2014

Extra Milers - for MWC  
ERICSSON, INDIA 2012

JOLT Award - for cross platform applications  
ERICSSON, INDIA 2011

## 🎓 Education

2015 - 2016  
EXPECTED IN JUNE

Master's Degree in Mobile Computing and Security  
KTH ROYAL INSTITUTE OF TECHNOLOGY, SWEDEN

**Main subjects:** RFID • Sensor based systems • Communication systems design

**Thesis:** MEMS tunable polarization rotator for sensing and communication, KTH MICRO AND NANOSYSTEMS

2014 - 2015

Master's Degree in Mobile Computing and Security  
NTNU, NORWAY

**Main subjects:** Mobile and Network Services • Dependability and Performance with Discrete Event Simulation • Engineering Distributed Real-time Systems • Internet Network Architecture • Software Architecture • Software Security • Information Security

2005 - 2009

Bachelor's Degree in Computer Science & Engineering  
JADAVPUR UNIVERSITY, INDIA

**Main subjects:** Engineering Mathematics • Circuit Theory • Electronics • Digital Logic and Circuits • Computer Organisation • Data Structures • Microprocessor • Data Communication Systems • Computer Architecture • VLSI Design • Compiler Design • Operating Systems • Graph Theory • Computer Networks • Compiler Design • Operating Systems • Design and Analysis of Algorithms • Computer Networks • Embedded Systems • Automata • Distributive Computing • Computer Graphics • Numerical Methods • Image Processing and Pattern Recognition

## 👜 Work Experience

06/15 - 08/16

Sikom Connect | **Embedded Software Engineer**  
OTTO NIELSENS VEG 12, TRONDHEIM, NORWAY

- Sikom Connect makes products for home automation
- Created secure connection pool platform ensuring 99% uptime and enhancing performance
- Wrapper controller to interact with web services

08/11 - 08/14

Ericsson India | **Senior Software Engineer**  
DLF IT PARK - II, RAJARHAT, KOLKATA, INDIA - 700156

- Architected customized BI tool for service management
- Worked on cross platform and native mobile apps
- Created VOIP client with 3<sup>rd</sup> party SIP services

08/09 - 08/11

PwC India Pvt Ltd. | **Full Stack Web Developer**  
BLOCK DN - 57, SECTOR - V, KOLKATA, INDIA - 700091

- Created web applications and portals
- Worked on process automation and improvement
- Client interaction and proposal drafting

## Projects During Studies

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### 08/15 - 01/16 **Designing low power gateways for Wireless Sensor Networks** | [KTH](#)

- Measured power consumption for various platforms viz. Rpi, Odroid, Beaglebone, OpenWRT
- Devised radio duty cycling use cases on gateways for low idle power consumption
- Removed unnecessary components consuming bus power

### 10/15 - 01/16 **Advanced vehicle detection clothing for cyclists using sensors** | [KTH](#)

- Used ultrasonic sensor, gyro sensor and accelerometer for system characterization
- Characterization of sensors using ADC
- Integrated product using a low power MSP 430 microcontroller

### 08/15 - 10/15 **Customized RFID tag with biosensor integration for advanced security** | [KTH](#)

- Developed customized RFID transmitter system with LC circuit and FSM
- Created modulation scheme for transferring data from the RFID transmitter to receiver
- Integrated an IR based heartbeat monitor to initiate the system for enhanced security

### 01/15 - 06/15 **Real time video streaming with RFID verification** | [NTNU](#)

- Created video streaming system using remote Rpi camera viewable on standard browser
- Used motion JPEG-streamer protocol for streaming
- Integrated product with RFID reader for initiating system with access control

### 01/15 - 06/15 **Customized server certificate for web application** | [NTNU](#)

- Created customized certificate from a Certificate Authority using a chain of trust
- Distribute key exchange mechanism using Diffie-Hellman algorithm

### 01/15 - 06/15 **Multiplayer android game** | [NTNU](#)

- Developed a multiplayer [Android puzzle game](#) from scratch using Unity-3D
- Designed database based on key-value pair with indexing for fast access
- Used REST APIs to interact with server side

### 08/14 - 01/15 **Web application penetration testing using KALI Linux** | [NTNU](#)

- Used KALI Linux for finding out vulnerabilities in an application
- Created a risk mitigation framework for managing the vulnerabilities using OWASP

### 08/14 - 10/15 **Simulation of Mobile Virtual Network Operator for QoS parameters** | [NTNU](#)

- Used MATLAB to simulate the MVNO environment
- Checked the QoS parameters using the queueing length of the nodes along with latency

### 08/14 - 10/15 **Created a LAN and VPN in lab environment** | [NTNU](#)

- Simulate and create network environment using NS3
- Created routing tables using OSPF and BGP protocols

## References

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### On request

I hereby declare that all the information provided here are true to the best of my knowledge.

**Sandipan Das**