

# Sandipan Das

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# **Professional Skills**

### **PROGRAMMING**

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<b>★★★☆☆</b>
<b>★★★☆☆</b>
★★☆☆☆
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<b>★★★★☆</b>
<b>★★★☆☆</b>
<b>★★★★☆</b>

## **SIMULATION**

CST EM studio
MATLAB



PCB design Audrino, RPi



MS Office	***
LATEX	****
InDesign	<b>★★☆☆☆</b>
Illustrator	★★☆☆☆

# **Personal Skills**

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



NordSecmob scholarship EUROPEAN COMMISSION 2014

Extra Milers - for MWC ERICSSON, INDIA 2012

JOLT Award - for cross platform applications ERICSSON, INDIA 2011



# **Education**

Master's Degree in Communication and Security EXPECTED IN JUNE KTH ROYAL INSTITUTE OF TECHNOLOGY, SWEDEN

Master's Degree in Communication and Security 2014 - 2015 NTNU, Norway

Bachelor's Degree in Computer Science & Engineering 2005 - 2009 JADAVPUR UNIVERSITY, INDIA



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# Work Experience

Sikom Connect | Embedded Software Engineer Intern 06/15 - 08/16 Otto Nielsens veg 12, Trondheim, Norway

- Sikom Connect makes products for home automation
- Created secure connection pool platform ensuring 99% uptime and enhancing performance
- Ensured loose coupling in framework for integration

10/14 - 03/15 NTNU TTO | R&D Programming Assistant, Part time DIGS, OLAV TRYGGVASONS GATE 30, TRONDHEIM, NORWAY

- Developed mechanism for server side packet loss check
- Worked on a tool for monitoring packet loss in network
- Created a VPN client for efficient traffic routing

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



# Volunteering Experience

Trondheim Developer conference, Norway 2014

Internetdagarna, Sweden 2015

# Projects During Studies

# 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

#### Customized RFID tag with biosensor integration for advanced security | KTH 08/15 - 10/15

- 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 andriod game | NTNU

- Developed a multiplayer <u>Andriod puzzle game</u> 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 OoS 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



### On request

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

### Sandipan Das