



Soumyakanti Roy

Curriculum Vitae

About Me

B. Tech. Electrical Engineer with an excellent academic record and a keen interest in CONTROL SYSTEMS, DIGITAL SIGNAL AND IMAGE PROCESSING and PROGRAMMING; with a practical exposure in the field of EMBEDDED SYSTEMS, POWER SYSTEMS and IMAGE PROCESSING.

Education

- 2012 **CBSE Secondary Education**, Kendriya Vidyalaya Ballygunge, Kolkata, West Bengal, India, CGPA – 10.0.
- 2014 **CBSE Higher Secondary Education**, Kendriya Vidyalaya Ballygunge, Kolkata, West Bengal, Percentage – 83.40.
Science With Computer Science
- 2014–2018 **Bachelor of Technology in Electrical Engineering**, Techno India University, West Bengal, Kolkata, India, Current CGPA – 9.26.

Academic Works

Research Works

- June - July, 2017 **Soumyakanti Roy, Mourani Sinha, Tapan Pradhan**, *Return Period Estimation of Maximum Significant Wave Height over Bay of Bengal based on Satellite Data using a Probabilistic Approach*, International Tropical Meteorology Symposium. Presented at INTROMET 2017
- 2018 **Soumyakanti Roy, Tanmoy Dasgupta, Tapan Pradhan**, *An Improved and Optimized Content-Aware Resizing Algorithm for Images with Densely Situated Foreground Objects*, International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET). Presented at WiSPNET 2018

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🌐 smyaknti.github.io

2018 **Soumyakanti Roy, Gourab Adhikari, Tanmoy Dasgupta, Tapan Pradhan**, *An Adaptive Warp Correction Algorithm for Handwritten Text Images with Non-Linear Baselines*, International Conference on Computing, Communication and Networking Technologies (ICCCNT).

Presented at 9th ICCCNT-2018

2018 **Gourab Adhikari, Soumyakanti Roy, Tanmoy Dasgupta, Tapan Pradhan**, *A Novel Technique for Unwarping Curved Handwritten Texts Using Mathematical Morphology and Piecewise Affine Transformation*, International Conference on Computing, Communication and Networking Technologies (ICCCNT).

Presented at 9th ICCCNT-2018

Major Academic Projects

Jan, 2016 **Laser Gesture Recognition**, *A laser gesture sensing module in which we used simple laser pointers and photo diodes to interface simple hand gestures to a digital medium which can then be interfaced with any other control mechanism trigger.*

GitHub Link: <https://github.com/smyaknti/LaserMotion>

Jan, 2017 **Automated Vacuum Cleaner**, *Prototype of a cheap yet automated vacuum cleaner. The first prototype contained only the locomotion mechanisms. We used local mapping and low cost and power efficient sensors and control units to achieve a small, cheap yet functional bot which was able to detect obstacles to some extent. This project is in testing stage and is still in development.*

GitHub Link: <https://github.com/smyaknti/VacuuBot>

June, 2017 **Smart Energy Meter**, *An inexpensive Internet of Things based energy meter which has data logging and realtime data analysis using Thingspeak and Firebase servers. The metering system is fairly accurate once calibrated for the range of Energy it is supposed to measure. This project is in testing stage and is still in development.*

GitHub Link: <https://github.com/smyaknti/IoTEnergyMeter>

Experience

Vocational

Jan – Feb, 2017 **15 Days Vocational Winter Training**, AIRPORTS AUTHORITY OF INDIA, Netaji Subash Chandra Bose International Airport, Kolkata, Dept. of Electrical Engineering. Gained experience at their Terminal building Service Yard and Basement Substation area operated by ABB India Ltd.

Visited their Open Yard Substation, the Runway Lighting System, Baggage Handling System and their rooftop On-Grid Solar Plant

Detailed achievements:

- Learned how redundancy and automation in Power Systems work
- Learnt the various Safety measures taken in a Always-on and high priority system
- Learned how Baggage Scanning and Sorting takes place using PROGRAMMABLE LOGIC CONTROLLERS and SUPERVISORY CONTROL AND DATA ACQUISITION systems.
- Analysed a small Solar power plant for the Maintainence, Feasibility and Operating Costs.
- Studied the various lights used in a typical ILS equipped Runway
- Studied the components used in a substation before the digital systems were implemented.

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2017 **6 Weeks Online Winter Training**, VLSI DESIGN USING VHDL, Internshala Virtual Training Centre, India.

- Learnt the Basics, Combinational and Sequential Modules of the subject.
- Learnt the Advanced section consisting of advanced chips like RAM and ROM.
- Scored 95.0% in the final test.

Computer Skills

Advanced PYTHON, L^AT_EX, C, C++, Arduino, Computer Hardware and General Software Management, Android Debugging,
Intermediate VHDL, MATLAB, AUTOCAD , NI Multisim, Microsoft Office, Linux, Microsoft Windows, PCB designing
Basic C#, Visual C++ , Processing Development Environment

Languages

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|---------|---------------|-------------------------------------|
| Bengali | Mother tongue | |
| English | Advanced | <i>Con conversationally fluent</i> |
| Hindi | Intermediate | <i>Con conversationally Fluent</i> |
| Spanish | Basic | <i>Basic Words and phrases only</i> |

Extra-Curricular Activities

- Attended ICC STARTUP PAD SEMINAR held on 4th Oct, 2016 regarding the present state of Eastern India Startups.
- Participated in DST-JBNSTS Science Camp from March 19 - 23, 2013.
- Have undergone 3 years of formal training in Art, Recitation and playing Tabla.
- Personal and non-formal skills include Presentations, Video editing and Photography.

Interests

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| - Deep Learning | - Electronics |
| - Data Science | - Designing |

Hobbies

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|-------------------|---------------|
| - Gaming | - Photography |
| - Problem Solving | - Debates |