

Curriculum vitae

PERSONAL INFORMATION



Abhik Ghosh

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Sex Male | Date of birth 20/04/1987 | Nationality Indian

PERSONAL STATEMENT

Experienced machine learning & automation engineer with a demonstrated history of working in the automation & energy industry.

WORK EXPERIENCE

06/2018–Present

Research Associate

RWTH Aachen University, Aachen (Germany)

- Involved in National 5G Energy Platform project
- Research in ICT Architecture, Cyber-physical system and Internet of things (IoT)
- Cloud computing and Cloud services: Openstack and Fiware
- Control algorithms, MPC and feedback controls
- Machine learning (Python, Tensorflow, Keras) and git repositories
- Artificial intelligence and data analysis (TensorFlow, R and Keras)
- Network protocols for building automation (MODBUS, BACnet/IP, MQTT)
- Databases (SQL, no SQL, influxDB, mongodB), JSON, Javascript, XML and UML

11/2016–06/2017

Student assistant

Fraunhofer IFF, Magdeburg

- Inverter design, PWM and control algorithms
- Battery system and e-vehicle simulations

09/2010–08/2014

Energy engineer (System engineer)

JSW Energy, Ratnagiri (India)

- Distributed Control System (DCS) Operation in Boiler base, Turbine base and CCS mode (1200 MW)
- SCADA operation/commissioning of gas insulated substation (GIS) and switchgear system (400 kV)
- Air conditioning system (Klimaanlagen) & HVAC system
- Client-server interfaces, Communication protocols: BACnet, MODBUS, IEC 60870, Ethernet TCP/IP
- SCADA-Trend, Data quality und Alarm analysis

EDUCATION AND TRAINING

10/2014–06/2017

Master of Science in Electrical Engineering and Information Technology

Otto-von-Guericke-Universität, Magdeburg (Germany)

- Specialization in Energy and Automation & Control subjects

- Energy optimization, power economics, demand response, smart grid, battery energy storage system (BESS) and renewable energy
- Master thesis : Development of an Energy Management System for demand response programs within smart DC houses
- Project : Demand response for heating and cooling purpose in smart house
- Conferences : 1. Comparison of power system simulation software PSS-NETOMAC with open source calculation tool Matpower, IEEE Germany Student Conference, 2016
- Grade 1.9

05/2009–05/2010 Post Graduate Diploma in Power Plant Engineering

JSW Energy Center of Excellence, Visveswaraiah Technological University, Bangalore (India)

- Specialization in Power system and Thermodynamics (Mass & heat transfer) subjects

05/2005–05/2009 Bachelor of Engineering in Electrical and Electronics Engineering

Visveswaraiah Technological University, Belgaum (India)

- Project : Design & development of simulator for fuel injection calibrating parameters
- Grade 2.1 (Aggregate score : 76 % - "First Class with Distinction")

PERSONAL SKILLS

Mother tongue(s) Bengali

Foreign language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
German	B1	B1	B1	B1	B1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Job-related skills

- Programming Languages : Java,C, C++, Modelica, MATLAB, Python, UML, HTML, XML, SQL, Object oriented programming
- Data analysis and image processing in Python and Tensorflow
- DNN and LSTM-RNN modelling for Artificial intelligence
- Regression and SVM predictive machine learning models
- Modelling and simulation in Embedded system (FPGA, microcontroller, PIC18F46K20)
- WinMOD (Process Simulation for Automation) & PLC programming (IEC-61131 programming)
- Modelling and simulation in Robot operating system (ROS)

Digital skills

- LaTeX, Windows OS, Microsoft Office, LINUX , Python, ROS and SimulationX