Curriculum vitae

PERSONAL INFORMATION

ABHIK GHOSH

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Skype abhik.tukai

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

PERSONAL STATEMENT

Experienced energy and automation engineer (IoT engineer) with a demonstrated history of working in the automation & energy industry.

Skills: Python developer, Machine learning, Cloud services, Web development, Internet of things.

WORK EXPERIENCE

Jun 2018–Present — Research associate

RWTH Aachen University, Aachen (Germany)

- Involved in National 5G Energy Platform project
- Research in ICT, Internet of things (IoT) and IoT platform (Python, Javascript, C, C++)
- Azure IoT stack, Cloud services, web services, cosmos DB (Openstack, Fiware)
- Django, Flask, Django Rest Framework, Django admin
- Docker container, Kubernetes
- Machine learning (Python, Tensorflow, Keras) and git repositories
- Databases (SQL , no SQL, influxdB, mangodB, CrateDB)
- IoT (Java, Javascript, ReactJS, NodeJS, MQTT, Web Server Communication)

Nov 2016–Jun 2017 — Student research assistant

Fraunhofer IFF, Magdeburg (Germany)

- Automation and control strategies for energy sytem
- Energy management system: Development and simulation of smart houses system in Modelica (SimulationX)

Sep 2010–Aug 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)
- Client -server interfaces, Communication protocols: Bacnet TCP/IP, Modbus RTU, IEC 60870, Ethernet, TCP/IP
- SCADA-Trend, Data quality und Alarm analysis

EDUCATION AND TRAINING

Oct 2014–Jun 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
- Master thesis : Development of an Energy Management System for demand response program within smart DC houses
- Project : Demand response for heating and cooling purpose in smart house
- Grade 1.9

May 2009–May 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

May 2005–May 2009

Bachelor of Engineering in Electrical and Electronics Engineering

Visveswaraiah Technological University, Belgaum (India)

- Specialization in power system and automation
- Project: Design & development of simulator for fuel injection calibrating parameters
- 76% - "First Class with Distinction

PERSONAL SKILLS

Mother tongue(s): Bengali, Hindi

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
- Process systems
  - Modelling of demand response, photovoltaic, thermal & batttery storage and distributed renewable energy resources (DRES)
  - Development and simulation of smart houses system in SimulationX software (Modelica) (numerical methods, Non-linear optimization)
- Power flow systems
  - Development and simulation of power system in PSS NETOMAC software (by Siemens) and Matpower software
- Image recognition and pattern recognition in time series data
- Modelling of LSTM-RNN, CNN, SVM, KNN, PCA, ICA and predictive algorithms
- Modelling and simulation in Embedded system (FPGA, microcontroller, PIC18F46K20)
- WinMOD (Process Simulation for Automation) & PLC programming (IEC-61131 programming), Beckhoff (TwinCAT)

Digital skills

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