Seraj Ahmad Siddiqui
Research and Product Development Engineer

SUMMARY

Mechanical engineer with one and half years of experience in research and product development. Skills in Designing, CAD, sensor development, Nano Technology, design optimization and manufacturing in industry 4.0, academic and fab lab.

WORK EXPERIENCE

Feb 2022 – July 2022
NANOSTRUCTURED PRESSURE SENSOR (MASTER THESIS)
HEIG-VD, Vaud, Schweiz

Focus: Microtechnology, nanotechnology, Design, sensors, 3D printing, Fab Lab
Task:
- In the frame of the industry 4.0 research program, a new generation of sensors is needed, to be integrated in micromachines or devices.
- The project aims at the design and fabrication of a small-scale pressure sensor using nanostructured thin film, using nanotechnology techniques mastered in the lab. A test bench will be developed to characterize this sensor, which will be integrated into a technology demonstrator by 3D print techniques.

Feb 2020 – Oct 2020
RESEARCH AND PRODUCT DEVELOPMENT ENGINEER
Heidolph Instruments GmbH & Co. KG, Schwabach, Germany

Focus: Prototype design, magnetic drive, modelling, 3D printing, Fab Lab.
Task:
- Updating and designing Magnetic Stirrers models using Creo Essential following the Additive manufacturing and reverse engineering process
- Testing the heating temperature of the Magnetic Stirrers from inside and outside
- Modifying the internal parts of Peristaltic Pumps using Creo essential
- Measuring the sound level of Shaker and Mixer from various distances at different rotational speed
- Comparing the differences between old and new magnets in the motor at different heights and rotational speed
- Designing and developing 3D models for Prototype applications using the Agile method
- Preparing 3D printing models (Slicing).

Dec 2014 – Oct 2015
CONSTRUCTION AND DESIGNING – TRANING
CEPTA Infotech, Noida, India

Focus: Design, drive, modelling
Task:
- Empowered and supported the team to follow the Scrum framework, to organize themselves, to give their 100% in their roles, to take responsibility for their actions and to update the burn-up chart
- Designed & Developed of Packages for Semi-Conductor Chips
- Designed Migration from Auto CAD to Inventor
- Fixture assembly with AutoCAD 3D
- IC engine assembly with CATIA software
- Documentation for Best practices, Design Methodology, Manufacturing Methodology.

PERSONAL DETAILS

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           90402, Nuremberg
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References

Portfolio: sheikhseraj.com
LinkedIn: sheikh-seraj
Xing: SerajAhmad_Siddiqui

Mechatronic Tools   Stand

- MATLAB/SIMULINK
- LabVIEW
- C & C++
- CAD Tools – SolidWorks, Creo, CATIA,
- ANSYS CFD Simulation
- PLC/SPS
- Datenbank
- Spectrum analyser – Cypher C-60, Oscilloscope, Multimeter
- HTML
- WordPress

Management Tools

- SAP ERP und S4 HANA
- Agile Scrum Master
- Produkt Lifecycle Management
- Jama Connect
- Jira
- MS Office –Word, Excel, Outlook, and Power Point

Certifications

- Physics - Electromagnetism - AP Physics
- ARM Instruction Set
- Mastering Microcontroller and Embedded Driver Development
- Mastering STM32F407 microcontrollers
- MATLAB Program
- SAP ERP und S4 HANA
- Agile Scrum Master Certification
- Product Design & Development
- Mechanical Design
- Nanostructured Pressure Sensor

Communication Skills

- Team spirit
- Friends in dealing with people of all nationalities
- Openness and communication skills and quick comprehension

Languages

Englisch – Fortschritt
Deutsch – Fortschritt
Hindi – Fortschritt
Urdu – Mittelstufe
Arabisch – Grundkenntnisse
Französisch – Grundkenntnisse

EDUCATION

Oct 2018 – July 2022

MASTER'S IN MECHANICAL ENGINEERING
Technische Hochschule Nürnberg Georg Simon Ohm, Nürnberg, Germany

Focus Area:
- **Project work-** Design I CAD models (To design a suitable measuring device for the vehicle exhaust sensors)
- **Project work-** Design II CAD models (development of an effective liquid separator with low flow losses to enable mixture formation studies at engine relevant flow conditions)
- **Project work-** Practical of product development (mobile toboggan lift - construction is realized as prototype built)
- **Project work** Experimental methods of automotive engineering and laboratory
- **Project work** process optimization (oil-fired small gas turbine)
- Simulation technology and automation engineering
- Modern tools in design: additive manufacturing and reverse engineering

Jun 2010 – Jul 2014

BACHALOR OF TECH. (MECHANICAL ENGINEERING)
Uttar Pradesh Technical University, Lucknow, India

Focus Area:
- Technical Mechanics / Dynamics
- Internal combustion engines and vehicle technology
- CAD and Materials technology
- Automotive Technology and Reverse Engineering

Project: Artificial Brain design and development
Responsibility: Built a system that showed and understood intelligent behaviour using machine learning techniques.

Bachelor's Thesis: Study & Analysis of Natural Fibre Reinforced Composite - Making Fibre from Banana Peels.
Task: The research has its application in development of light weight and eco-friendly fibre for use in automotive parts, artificial limbs, etc.
Applications: Lightweight automotive parts, knee and elbow closures, helmets, recycling, etc.