Contact

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(LinkedIn)

Top Skills

ECAD

Sparx Enterprise Architect

Automation ML

Languages

Hindi (Limited Working)

English (Full Professional)

Malayalam (Native or Bilingual)

German (Limited Working)

Certifications

Mastering EPLAN: Course on
Electrical Engineering Design

Lean Six Sigma Foundations

Get started with Jira

Developing an Omniverse Kit-Based
Application

Goethe Zertifikat A2

Sooraj Sunil

Masterand bei Bosch Rexroth | Msc. in Systems Engineering for
Manufacturing | Material Flow Simulation | Virtual Commissioning |
Digital Twin
Stuttgart, Baden-Württemberg, Germany

Experience

Bosch Rexroth
1 year 5 months

Master Thesis
October 2025 - Present (4 months)
Stuttgart

Topic: Evaluation of EPLAN generation in a digital engineering tool chain for
mechatronic components of transport systems

• Conceptual development of an AutomationML based engineering data
logistics to integrate EPLAN generation from simulation models using a
Common Data Model.

• Enriched TS2 simulation objects with electrical metadata and developed a
Visual Components Python add-on to export information model in a structured
JSON/XML.

• Developed AML foundation for data mapping by creating System Unit
Classes in Enterprise Architect using DIAMOND Common Concept modeling
for AML generation.

Simulation in Customer Business Factory Automation Werkstudent
March 2025 - September 2025 (7 months)
Stuttgart

• Development of Simulation models, definition of technical requirements and
development of library components in Visual Components for Transfer System
TS1evo and VarioFlow Belt.

• Evaluation and implementation of a Python based Add-On in Visual
Components for XML based import and export of simulation models.

• Development of a simulation model for the sales process in a customer
project of the Active Shuttle System for evaluating, optimizing and analyzing

cycle times and the technical configuration of the Autonomous Mobile Robot system.

• Conception and evaluation of configurable PLC function blocks for controlling the Transfer System TS2 as well as implementation and validation of a demonstrator with modified simulation components for ctrlX-based Virtual Commissioning.

• Drafting of a technical specification for a standardized component library for platform independent Virtual Commissioning of the Transfer System TS2.

• Evaluation of requirements for NVIDIA Omniverse and Visual Components.

• Familiarization with the standardized derivation of electrical diagrams in EPLAN from a simulation model for automating the digital engineering chain in customer projects.

Simulation in Customer Business Factory Automation Intern
September 2024 - February 2025 (6 months)
Stuttgart, Baden-Württemberg, Germany

• Implementation of simulation models (for Demonstrators, Prototypes, Projects): Component creation, python programming, sorting algorithms, process modelling.

• Creation, execution, and documentation of software tests for simulation libraries: Transfer System TS1, TS2, TS5 and VarioFlow plus following the V-model framework.

• Development and implementation of library components for VarioFlow belt and TS1.

• Design and documentation of demonstrator / training models for ctrlX-based virtual commissioning of technical systems in Visual Components.

• Implementation of a proof of concept for the operational virtual commissioning of TS2, including evaluation of signal models and process logic, as well as integration of PLC function blocks.

Otto-von-Guericke University Magdeburg
Tutor - Material Handling Systems
October 2023 - March 2024 (6 months)

Saxony-Anhalt, Germany

Key responsibilities: Conducting Automated Storage and Retrieval System (ASRS)
experiments, Course content preparation, Academic advising.

Nitta Gelatin India Limited
3 years 1 month

Senior Engineer (Collagen Peptide Expansion Projects)
July 2022 - September 2022 (3 months)
Kochi, Kerala, India

• Collaborated with Industrial engineering design team iteratively to optimize plant
layout and production line design, Piping and Instrumentation diagram.
• Prepared project works schedule Gantt chart in correspondence with equipment
lead time.
• Procured technical and budgetary offers for respective equipment required for the
new plant from various vendors.
• Prepared PLC program logic for automation of the production operations.

Senior Engineer (Peptide Production)
April 2021 - July 2022 (1 year 4 months)
Kochi, Kerala, India

• Production plant operation, quality checking and production planning.
• Experience in Collagen peptide powder conveying from Spray drier by means
of Pneumatic conveying system using cyclone separators and blowers to silos.
• Led continuous improvement projects (Kaizen) to increase operational
efficiency.
• Coordinated Cross functional teams for process automation and optimization
resulting in 30% daily production increase.
• Implemented Lean principles like 5S in and around the production plant.
• Utilized Kanban boards to monitor and manage 5S related activities.
• Preparation of performance data and charts based on production figures for
monthly Performance Review meetings using MS Office.
• Maintaining Standard Operating Procedures (SOPs), ISO standard
documents.
• Inventory management and purchase order creation using ERP packages
like SAP.
• Trained internal auditor for ISO 50001: 2018-Energy Management Systems.

• Execution of activities to ensure compliance, maintaining and continual improvement with ISO systems and standards like:

a. ISO 9001 : 2015

b. ISO 140001:2015

c. ISO 50001: 2011

d. ISO 22000

e. OHSAS 18001:2007

f. Good Manufacturing Practices (GMP)

Graduate Engineering Trainee
September 2019 - April 2021 (1 year 8 months)
Kochi, Kerala, India

Cochin Shipyard Limited
Intern
July 2018 - July 2018 (1 month)
Kochi, Kerala, India

Steel and Industrial Forgings Ltd
Intern
July 2016 - July 2016 (1 month)
Thrissur, Kerala, India

Education

Otto-von-Guericke University Magdeburg
Master of Science - M.Sc, Systems Engineering for Manufacturing · (October 2022 - March 2026)

Government Engineering College, Thrissur
Bachelor of Technology - BTech, Mechanical Engineering · (2015 - 2019)