

# Abhimanyu Sharan

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## Career Objective

Entry-level professional with 2 years of experience as a mechanical design engineer. Experienced and specialized in computer aided design (3D CAD and 2D CAD) along with interests in numerical analysis, thermo-fluids engineering, as well as software programming. Quick learner who can adapt to new practices quickly and possess good communication skills.

## Core Competencies

- 3D CAD and 2D CAD on Siemens NX and Solid Edge with good knowledge of Teamcenter.
- Numerical computation using Computational Fluid Dynamics (CFD) and Finite Element Analysis (FEA).
- Passion in mathematics, problem solving and logical reasoning.
- Proficient in scripting on Python and MATLAB.
- Technical knowledge in the mechanical, aerospace and software fields. Strong interest in R&D.
- Good communication skills (written and verbal communication), interpersonal skills and experienced in working in project teams.
- Friendly, engaging, creative, innovation, reliability, highly motivated, attention to detail, collaboration, leadership skills.

## Work Experience

### CONSULTANT ERGONOMIST AND CORPORATE MANAGER | RECOUP | APRIL 2020 - PRESENT

- The organization provides Occupational Health and Ergonomics Consultancy services to multiple companies.
- My work involves identification of potential risks by analyzing how computer users interact with their systems. Have completed assessments for 100+ clients working from home.
- Responsible for business development by fixing tie-ups with new corporate clients and for product management by partnering with ergonomic and orthopedic products vendors.

### MECHANICAL DESIGN ENGINEER | WEIR ENSCI | JULY 2018 – MARCH 2020

- The company supports Weir businesses across the group with tailored engineering solutions. The Weir Minerals division which dealt with mineral processing products such as pumps, crushers, screens, conveyors, cyclones etc.
- Initially joined as an **Engineer Trainee** and then got accepted as an **Engineer**.
- Had executed billable projects as a member of the Engineering Automation and Plant Solutions teams working on Modular Skid generation and pump-set assembly generation.
- Extensive CAD exposure by practicing 3D modelling and assembly and 2D detailing on NX11.0 and NX8.5
- Learnt about plant engineering, reading process flow diagrams, and planning layouts, and attended numerous training courses in subjects including Engineering drawing and Standards, Lean Manufacturing, Value Engineering, Geometrical Dimensioning and Tolerancing, innovation, manufacturing processes, additive manufacturing, welding, and many more.
- Also did a minor project as a trainee on selection of centrifugal pump for slurry transportation and designing layout of a piping system within specified constraints.

## Projects

### PUMP-SET ASSEMBLY AUTOMATION | 2019-2020

- Project at Weir EnSci using Siemens NX and Teamcenter to satisfy requirements of Weir Minerals Europe.
- Designed a user interface for automatic generation of a 3D assembled model and a general arrangement drawing of pump sets of different drive arrangements.

- These helped improve productivity by quickening the order execution process and minimizing repetitive work.

## **MODULAR STRUCTURE GENERATION | 2018-2020**

- A series of design and automation projects at Weir EnSci to satisfy a global requirement where I designed scalable modular structures for different sizes of heavy equipment such as crushers and screens.
- Built user interfaces using NX Product Template Studio for easy selection of requirements and equipment size.
- The assembly would adjust according to the dimensional and safety standards of the selected region.
- Simultaneously focused on weight optimization of the structural assembly by reducing the weight by 42% for the Jaw Crusher module and 17% for the Vibrating Grizzly Feeder module while working on the primary crushing station.
- The projects were executed in an agile environment and was tracked on Jira.

## **ANALYSIS AND OPTIMIZATION OF HEAT EXCHANGERS | 2017-2019**

- Final year B. Tech project where a three-fluid cross flow heat exchanger was analyzed under different conditions and arrangements using Finite Element Method on MATLAB and was optimized using Genetic Algorithm.
- A part of this project was accepted by the journal of [Thermal Science and Engineering Progress](#) while another part of the project was presented by me at an [international conference](#) held at Indian Institute of Science in 2018.

## **COOLANT SPILL REDUCTION | JUNE-JULY 2016**

- Internship project at **Toyota Industries Engine India**, Jigani, Karnataka which involved detailed observation of CNC machining processes and the safety measures to be taken in the engine plant.
- Identified causes for coolant leakages in the cylinder head machining line and suggested control measures. Managed to suggest different solutions to reduce coolant loss by up to 25% per shift.

## **BALL SHOOTING MECHANISM | 2014**

- First year university project in unified engineering where an Arduino board, ultrasonic sensor, and DC motor was used to build a ball shooting mechanism prototype.

## **Achievements**

- Rank holder medal for obtaining 6th rank in the mechanical branch during my undergraduate program.
- “STAR TEAM MEMBER AWARD” during my employment with Weir EnSci.
- Merit scholarship awards and distinction cash awards during all my semesters.

## **Certifications**

- **Certified Ergonomic Assessment Specialist (CEAS III)** for Practice and Management of Occupational Ergonomics from The Back School, Atlanta.
- Coursera certifications for **Python for Everybody** and **Applied Data Science with Python** specializations and have done non-certificate specializations on **Django** and **PostgreSQL** from University of Michigan.
- Non-certificate course on **Machine Learning** from Stanford University on Coursera.
- Software skill certifications on **HackerRank** for Python, Java, Javascript and Problem Solving
- Certificate course on **Mechanical Vibration Analysis using Computing Techniques** from PES University.
- **B. Tech Specialization in Thermo-Fluids Engineering** during my bachelor's degree at PES University.
- **B. Tech Minors** degree certificate in **Electronics and Communication** at PES University.

## **Education**

### **BACHELOR OF TECHNOLOGY (B. TECH) IN MECHANICAL ENGINEERING**

- University Name: PES University, Bengaluru
- Duration: 2014-2018
- CGPA: 9.07/10
- Overall branch rank of 6