UMAIR SARWAR

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OBJECTIVE

Seeking a full time opportunity in product and manufacturing design and consulting.

EDUCATION

PURDUE UNIVERSITY
MS, MECHANICAL ENGINEERING
West Lafayette, Indiana
May 2020 | GPA: 3.7/4.0

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BS, MECHANICAL ENGINEERING
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Dec 2017 | GPA 3.7/4.0

SKILLS

Design•Prototyping•CAD•
Decision Making•Improvement•
Research•BioImaging Analysis

DESIGN SOFTWARE
SolidWorks•CATIA V5 •
Inventor AutoCAD

PROGRAMMING
Matlab•Python•Javascipt

CERTIFICATIONS
Lean Six Sigma Green Belt,
SSGI(ID:13549203)

LEADERSHIP ROLE

CAPTAIN |PURDUE UNIVERSITY CRICKET TEAM |May 2017 - Jul 2019
Purdue University

PRESIDENT | PAKISTAN STUDENT ASSOCIATION |May 2015 - Dec 2017
Purdue University

GRAD COURSEWORK

Product Process Design Innovation
Reliability & Safety Engineering
Design for Robotic Controllers
Decision Making in Engineering
Statistical Quality Control

WORK EXPERIENCE

MODINEER COMPANY, LLC. |MANUFACTURING & IMPROVEMENT INTERN
Apr 2020 - Present | Mishawaka, IN

- Leading the consultation & research team for the analysis & selection of the right Product Management/Lifecycle System for the company
- Developing a plan for phased implementation of the software as well as generate & transform PPAP workflows to the software

COOK BIOTECH |PRODUCT DESIGN & DEVELOPMENT INTERN
May 2019 – Aug 2019 | West Lafayette, IN

- Brainstormed & developed 5 high fidelity prototype models for loading a piece of human tissue into hypodermic needed (0.003575in OD)
- Designed the *"Fish-hook Pull"* using a smaller needle & a wire EDM fixture
- Optimized the efficiency of the design by using multiple kerf widths, fixture placements, pull methods & pull speeds
- Verified the reliability of the design statistically-96% in 50 samples
- Proved viability with a significant labor & time reduction-10 mins to 30 sec

ORIENT GROUP |MANUFACTURING ENGINEERING INTERN
May 2016 – Jun 2016 | Lahore, Pakistan

- Optimized plant layouts to increase daily production from 700 to 770 sheets
- Performed time studies on the vacuum thermoforming & stamping machines to understand delays & improve production efficiency
- Developed CAD models & coordinated the production of 5 components going into the prototype of a new refrigerator model
- Assisted in post assembly performance & quality testing of compressors

RESEARCH & TEACHING

GRADUATE RESEARCH ASSISTANT, REID LAB
Jan 2018 - Present | Purdue University, West Lafayette

- Determining the latent need & decision making of the end-users by using psychophysiological sensors (fNIRS, EEG, Shimmer) & utilize them in the development of human-centered design & brain-computer interface
- Focused on investigating the relation between workload, trust & learning curve in cognitive physical systems (UAV's, Self-Driving Cars)
- Investigating the learning curve of obstacle using Mturk designed study which will be translated to a driving simulator & UAV
- Trained at doing fNIR data acquisition & data analysis using Homer3
- Mentored 2 undergraduate students on fNIR data analysis

HEAD TEACHING ASSISTANT
Aug 2017 - May 2019 | Purdue University, West Lafayette
Sophomore Design Class (ME 263)

- Generated lab plans, deliverable checklists & weekly teaching slides to help prepare the teaching team of 16-20 people
- Provided technical training to the teaching staff on the use of lathe, press & 3D printed to assist student teams in prototyping
- Responsible for coaching students about different technical documents (HOQ, BOM, GDT), technical writing, manufacturing phases & prototyping skills
- Guided and coached students to the art of defining, developing problem statements, problem scoping, customer research & market analysis