**ABHAY BRIJPAL SINGH GAHLOTH**

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**SUMMARY**

Recently graduated Mechanical Engineer seeking a fulltime opportunity and willing to relocate. Areas of Expertise: cGMP Manufacturing Processes, Cleanroom Manufacturing, Process and Equipment validation, Product Design and Testing.

**EDUCATION**

**Master of Science in Mechanical Engineering**  Aug 2018 –May 2020

Arizona State University, Tempe, Arizona GPA: 3.67 **(*magna cum laude*)**

**Bachelor of Engineering in Mechanical Engineering**  Aug 2013 – July 2017

PES Institute of Technology-Bangalore South Campus, India Percentage: 76.7% (Highest-81%)

**TECHNICAL SKILLS**

**Certification Courses:** GD&T, Lean Six Sigma Green Belt (FMEA, Root Cause Analysis, Statistical Process Control)

**Applications/Software**: SolidWorks, CATIA, MATLAB, ANSYS Fluent, JMP, ABAQUS, Microsoft Office.

**WORK EXPERIENCE**

 ***Manufacturing Associate (Jan 2021 – Present) | Manufacturing Engineer Intern (Nov 2020 – Jan 2021)***

**Medivant Healthcare – Chandler, Arizona Nov 2020 - Present**

* Performing manufacturing operations in a cleanroom environment following ISO 5, ISO 7, and ISO 8 classifications to produce controlled, sterile, single-dose, liquid injectable drugs (Ketamine, Atropine) present on the FDA's drug shortage list.
* Authoring and revising Batch Manufacturing Records, Standard Operating Procedures and Protocols according to 21 CFR parts 210 and 211.
* Performing equipment and process validation in a cGMP environment following IQ, OQ, and PQ quality assurance protocols.
* Managing the vial labeling and packaging operations by overseeing Manufacturing Tech functions including in-process vial storage, drug/vial inspection, vial labeling, vial packaging and primary bulk reconciliation.
* Operating and troubleshooting the complex vial filling, stoppering, and capping machine, performing pre and post filling filter-integrity tests, machine calibration, and statistical weight checks to ensure optimal production of the injectable drugs.

***Graduate Research Assistant* – Arizona State University, Tempe, Arizona May 2020- Oct 2020**

* Performed experimental measurements and modeling of lattice rotation around inter and trans-granular spall voids in shocked copper samples.
* Ran temperature-displacement and dynamic, explicit FEA simulations using ABAQUS and SolidWorks to generate and validate a strong FEA model that simulates behavior of a void in a copper sample for the given shocked loading conditions.

***Technical Intern*- 3M India, Bengaluru, India July 2015**

* Assisted with product design & prototyping. Gained handheld consumer product development experience and applied rapid prototyping skills by CAD designing (SolidWorks) and 3D printing the prototype using STRATASYS.
* Used Automated Test Equipment (Fanuc 6 axis robot and Instron testing machine) for developing physical test methods to ensure the design met the requirements throughout its lifecycle.
* Developed and executed test methods. Provided engineering design recommendations, failure analysis and report writing, creating and modifying documents associated with the design change process.

**ACADEMIC PROJECTS / LEADERSHIP SKILLS**

Design of Experiments (DOE): Study and Analyze factors that Affect Lap Time of a Competitive Swimmer. Aug-Dec 2019

* Adopted 2k Full Factorial Design with Blocking to study and analyze the effect of swimsuit design, wind direction and temperature on lap time of a professional swimmer.
* Used Minitab to generate ANOVA table, Half Normal Plots, Interaction Profiles and Residual Plot for the completely randomized experiment and derived optimum conditions for best lap time.

Micromechanics Model for Nylon + Chopped Carbon Fiber 3D Printed Composites. (SFF Symposium 2019) Jan-May2019

* Led a team of 5 and designed tensile test specimens according to the ASTM standards using SolidWorks. 3D printed the test material extrusion samples using Onyx and Chopped Carbon Fiber with varying volume fractions and fiber orientation.
* Performed tensile and modulus tests using Instron testing machine and Digital Image Correlation software. Interpreted the data and developed a mathematical model using fundamental mathematics and statistical data analysis.