Joseph Q Tay

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Education

Purdue University - West Lafayette, Indiana **Dec 2016**
B.S Industrial Engineering, Minors in **Economics** and **Statistics**
GPA: 3.38/4.0

Programming Languages: HTML/CSS, vPython, R, SAS, Swift, C, Matlab, SQL, PHP
Software Knowledge: MiniTab, Arena, Photoshop, AutoCAD, Autodesk 3dsMax, CATIA, MySQL
Languages: English (Native), Mandarin (Fluent), Korean (Conversational)

Experience

Manufacturing Engineer II **Feb 2019 – Present**
Structural Heart Valves
Medtronic Inc – Santa Ana, California

- Writes protocols and reports for qualification and validation activities of process changes and new equipment introduction.
- Investigates and dispositions nonconforming product, evaluates root cause and implements corrective actions to prevent recurrence.
- Provides daily support to troubleshoot and resolve equipment and process issues on multiple manufacturing lines, reducing production downtime.
- Identifies process improvement opportunities in the valve assembly process and leads Lean-Six Sigma projects, effectively improving manufacturing yield and optimizing material usage variance.
- Designs manufacturing processes and sequence of operations in compliance with FDA and other regulatory bodies.
- Champions Continuous Improvement projects, providing lean/six sigma green belt mentorship to team members initiating process improvement initiatives.
- Provides solutions to issues related to process, equipment, supply chain, IQ/OQ/PQ, PLM, and QMS.

Associate Manufacturing Engineer **Jan 2018 – Jan 2019**
Structural Heart
Medtronic Inc – Orange County, California

- Supports 2 Production line Value Streams, optimizing manufacturing process through one-piece flow.
- Drives to completion A3 yield projects to enhance output and reduce scrap raw materials.
- Eliminates bottleneck through implementation of ergonomic and 5S standards.
- Improves Material Usage Variance through A3 projects directed at finding defective products early in the production process.

Process Quality Engineer **May 2017 – Jan 2018**
Quality Department
FreshRealm LLC - Riverside, California

- Writes, reviews and edits company-wide GMPs, SOPs and Quality Control Policies.
- Facilitated launch of new retail program in freshly-acquired facility, setting up production lines and inventory locations utilizing LSS concepts like Kanban systems (a necessity for JIT fresh food inventory), Cell layouts for efficient product flow and 5S Methodology to minimize waste
- Trains and manages a team of Quality Control Technicians to perform standardized work involving ground-level quality management tasks.
- Assists in developing and implementing new processes with the PDCA methodology to drive down waste and inefficient allocation of resources.
- Launches CAPA projects by acquiring, cleaning and mining data for production-based root-cause analysis of quality issues, developing solutions and driving continuous improvement of existing processes.
- Owns CAPA projects, driving them to completion with the use of sprint planning and Gantt chart timelines with set goals through effective time management and efficient resource utilization.
- Supports fulfilment operations by helping manage production facility team to boost standard times and meet takt times more often and more effectively, while driving down labor costs.

- Works within a multidisciplinary quality team to establish and continuously enhance a more comprehensive Quality Management System, with the integration of multiple departments' information databases into a centralized platform for efficient data report generation during CAPA projects.
- Bolsters company efforts to obtain SQFII and potentially ISO certification through the development and authoring of important safety, quality, maintenance, and training policies.
- Drive continuous improvement within production facility to enhance productivity and profitability based on specific key performance indicators while adhering to food safety standards.

Research Assistant Jan 2016 – Dec 2016
School of Industrial Engineering
Purdue University/NASA - West Lafayette, Indiana

- Performed Human-Machine Interaction experiments funded by a NASA research grant to establish hypothesized discrepancies in flight performance.
- Acquired, cleaned and populated database with only practical data to optimize procedural analysis.
- Investigated the correlation between flight risk and verbal task load intensity on pilots using advanced statistical algorithms.

Teaching Assistant July 2014 – Dec 2015
Physics and Astronomy Department
Purdue University - West Lafayette, Indiana

- Observed and analyzed students' behavior in order to guide successful classroom instruction.
- Guided students on the use of vPython coding language to simulate physics concepts in real-world situations.

Section Commander, Sergeant June 2010 – June 2012
30th Battalion Singapore Combat Engineers
Singapore Armed Forces - Singapore

- Led six-man squad during military activities which increased morale and rapport amongst members.
- Devised and executed multiple tactical strategies to improve mission success ratings.

Design Projects

Production Planning System for Job Shop Fall 2016
Purdue University School of Industrial Engineering Senior Design Project
Fewell Monument – Scottsburg, Indiana

- Formulated predictive model using data from time studies based on determinable scales and metrics common to all headstones.
- Tested predictive model against historical data, using regression analysis to increase effectiveness of model.
- Provided a way to forecast the production time of a product to give accurate deadlines, reducing the number of late orders fulfilled.

Wine Company Infrastructure Audit Fall 2015
Purdue University School of Industrial Engineering Capstone Project

- Developed website for simulated wine company's intranet webpage using HTML/CSS.
- Constructed optimal sales model and workflow using Arena Software to determine best allocation of resources.
- Utilized MySQL to develop and query a database of sales and business strategy metrics for easy compilation.
- Generated method to forecast future sales by using R statistical package to analyze queried metrics.
- Designed floor plan for optimum throughput rate of consumers and products using AutoCAD.

Affiliations

Alpha Pi Mu (Purdue Chapter) – Industrial Engineering Honors Society 2016
NSCS – National Society of Collegiate Scholars 2012