

Chin Zheng Yang

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EDUCATION

NATIONAL UNIVERSITY OF SINGAPORE

Aug 2021 – May 2023

Master of Science (MSc), Industrial and Systems Engineering

- Specialization Electives in Operations Research
- Thrive to maximize productivity and minimize cost by data analytic and decision making coupled with economic concepts
- Aspire to tackle real industry problem by applying modern engineering and IT tools and techniques like simulation and programming

NANYANG TECHNOLOGICAL UNIVERSITY, SINGAPORE

Aug 2015 – May 2019

Bachelor of Engineering (Honours), Mechanical Engineering (Energy and the Environment)

- First Class Honours (**Highest Distinction**)
- CGPA: 4.80/5.00
- Recipient of Dean's Lists Awards
- Recipient of NTU President Research Scholar

WORK EXPERIENCES

EXXONMOBIL Asia Pacific Pte. Ltd

May 2021 – Present

Fixed Equipment Contact Engineer

- Planned and carried out fixed equipment inspection via on-stream risk-based monitoring program and downtime inspection activities for Singapore Chemical Plant (SCP)
- Led as Investigation Lead in multiple root cause failure analyses to recommend cost effective maintenance and preventing repeated failure
- Developed and updated piping and fixed equipment strategy using Microsoft Access
- Engineered the use of advanced inspection techniques (eg. Inspection using drone and robotics) resulting in a safer and more cost effective inspection
- Performed design review of Clamp design and calculation, piping and pressure vessel rating and retirement thickness assessment, general assembly drawing, piping isometric and P&ID drawings
- Ability to communicate effectively with various stakeholders in process, maintenance, technical and engineering departments in the daily operation of the plant
- Ability to use FEA software (PVElite and CAESAR II) to perform fixed equipment and piping analysis
- Proficient in the application of industry standards - API510, 570, 650, ASME Section VIII Div 1, ASME B31.3 and ASME B31.1

EXXONMOBIL Asia Pacific Pte. Ltd

Oct 2020 – Present

Data Analyst

- Crafted requirement gathering, planning and implementation of the daily transaction level inspection plan database
- Created end to end Python scripts to automate raw transaction data ingestion, cleaning, processing, and reporting using Tableau
- Led a team of 5 planners to create aggregated data sources to empower data analysis site wide
- Successfully implemented canned reports and interactive Tableau dashboards for KPI tracking, leading to a decrease in barrier hours by 20%, which increased overall departmental efficiency and productiveness
- Spearheaded an initiative to build a machine learning based prediction system to predict corrosion rate of insulated piping that achieved 91% accuracy

EXXONMOBIL Asia Pacific Pte. Ltd
Inspection Front Line Supervisor

Jul 2019 – Apr 2021

- Led a team of 4 inspectors for efficient execution of fixed equipment/piping inspection programs
- Led business teams in ensuring mechanical integrity via the recommendation of several NDTs
- Planned, implemented, and followed plant inspection plan for the existing fixed equipment by identify the damages and determine the inspection effectiveness as per API code
- Involved in Root-Cause Failure Analysis for identified equipment bad actors

SCHLUMBERGER
Mechanical Engineer (Intern)

Jan 2018 – Jun 2018

- Engaged and collaborated with the Manager and Senior Engineer in the digitization project
- Researched and applied reverse-engineering principles like 3D scanning technique to enable digitization of legacy components of Electrical Submersible Pump (ESP)
- Developed a new and effective protocol to perform digitization of legacy products which can be utilized by engineers in New Product Development department
- Investigated the quality of digitized products via carried out Computational Fluid Dynamics (CFD) analysis on a weekly basis using ANSYS Fluent
- Performed deviation analysis on 3D printed legacy parts with their corresponding CAD models through 3D imaging technique and presented analysis report to the manager

RELEVANT PROJECTS

NANYANG TECHNOLOGICAL UNIVERSITY, SINGAPORE

Jul 2018 – Apr 2019

FYP: Carotid Artery Thermography Image Processing with Data Management

- Create an algorithm to detect stenosis of carotid arteries using data acquired from national hospital
- Implement and demonstrate the methodology using Python scripts and OpenCV package
- Successfully improve the accuracy of detection of stenosis by 75%

CERTIFICATIONS & ONLINE COURSES

Accomplished over 10 MOOC courses and accumulated over 100 hours learning on Statistics, Data Science, Database. Skilled in Python, Tableau and SQL.

- **Language/Database:** Python, SQL
- **Environment:** MATLAB, Jupyter Notebook, Spyder, Tableau
- **Data Visualization Package:** Pandas, Matplotlib, Seaborn
- **Certificates:** Tableau Desktop Specialist, AWS Certified Cloud Practitioner

REFERENCES

Dr. Cheah Kean Wee

Team Lead
Schlumberger, Singapore

Email No: KCheah@slb.com
Tel No: 9431 7813

Aloysius, Tay Kay Chong

Fixed Equipment & Inspection Second Line Supervisor
ExxonMobil, Singapore

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