# EDUCATION

Chin Zheng Yang

Email: [yanchinwar@gmail.com](mailto:yanchinwar@gmail.com) | Tel No: 8435 7738

## 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 rerating 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 Jul 2019 – Apr 2021

**Inspection Front Line Supervisor**

* 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 Jan 2018 – Jun 2018

**Mechanical Engineer (Intern)**

* 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](mailto:KCheah@slb.com) Tel No: 9431 7813

**Aloysius, Tay Kay Chong**

Fixed Equipment & Inspection Second Line Supervisor ExxonMobil, Singapore

Email No: [Aloysius.kc.tay@exxonmobil.com](mailto:Aloysius.kc.tay@exxonmobil.com) Tel No: 91513922