

JUN JIE YEO

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Education

National University of Singapore

BACHELOR (HONOURS) OF SCIENCE IN CHEMISTRY, CGPA: 4.06

Singapore

Aug. 2019 - Dec 2022

- Relevant Coursework: Instrument Analysis, Trace Analysis, Materials Chemistry, Cheminformatics
- Other Notable Coursework: Computational Thinking and Programming in Chemistry, Programming Methodology

Ngee Ann Polytechnic

DIPLOMA IN BIOMEDICAL SCIENCE WITH SPECIALIZATION IN MEDICINAL CHEMISTRY, CGPA: 3.74

Singapore

Aug. 2014 - May. 2017

- Relevant Coursework: Analytical and Separation Chemistry, Structural Chemistry

Skills

Laboratory Competencies:

Chemical: Isotope Ratio Mass Spectrometry, Spectroscopy (UV-VIS, IR), Chromatography (LCMS, GCMS)

Biological: Cell Culture, Enzymatic Assay, Protein Purification, Gel Electrophoresis (SDS-PAGE, Agarose)

Software: Autodesk Fusion, Autodesk Autocad, KiCad, Microsoft Office, Python (Pandas, scikit-learn)

Work Experience

Health Sciences Authority

LABORATORY INTERN, FORENSIC CHEMISTRY AND PHYSICS LABORATORY

Singapore

Jun. 2022 - Dec. 2022

- Conducted Isotope Ratio Mass Spectrometer (IRMS) measurement operations and maintenance.
- Developed Python scripts for efficient data processing of raw IRMS output for use in statistical tests and data visualization.
- Performed instrument and method validation for an Isotope Ratio Mass Spectrometer.
- Wrote and improved upon various previously established standard operating procedures and workflows for improved clarity and instruction.

Singapore Armed Forces

MEDICAL OFFICER'S PERSONAL ASSISTANT, 1ST BATTALION, SINGAPORE INFANTRY REGIMENT (1SIR)

Singapore

Jul. 2017 - Jul. 2019

- Consolidated and processed daily sick reporting statistics for the Unit Medical Officer during peacetime.
- Maintained spreadsheets for sick reporting statistics for use in trend analysis and data handling.
- Spearheaded periodic vaccination exercises involving the battalion (about 700 people), achieved zero incidents over 4 vaccination exercises.
- Conducted rudimentary first aid training for the battalion, achieving highest award during evaluation.
- Consolidated and reported casualties of battle to key appointment holders during active deployment.

Nanyang Technological University

LABORATORY INTERN, DAHAI LAB

Singapore

Mar. 2016 - Jun. 2016

- Performed Bacterial Cell Culture, Protein Purification and Analysis of purified proteins for study of Chikungunya Virus (CHIKV) Non-Structural Proteins.
- Analysed relationships between CHIKV Non-Structural Proteins and various nucleic acid sequences through use of enzymatic assays.

Academic Projects

Design of Visible-Range Spectrophotometer Optimised for Spectrum Analysis

PROJECT FOR CM3267 - COMPUTATIONAL THINKING AND PROGRAMMING IN CHEMISTRY

Singapore

Jan. 2022

- Designed and built a spectrophotometer capable of visible range spectrum scanning, powered by a Raspberry Pi.
- Conducted design of experiments (DOE) using full factorial design to optimize device parameters.
- Design was tested to be capable of resolving mixtures of different coloured food dyes.
- Utilised extracurricular skills like 3D modelling, Python and hardware assembly.

Purification and Enzymatic Studies of Chikungunya Virus Helicase Proteins

FINAL YEAR PROJECT AT Ngee Ann Polytechnic

Singapore

May. 2017

- Grew bacterial cell cultures transformed with plasmids encoded with Chikungunya Virus protein sequence(s) in order to study the enzymatic activity of the harvested proteins after harvesting and purification from the culture.

Awards and Achievements

Best Hardware Hack, NUS Hack&Roll 2020

NATIONAL UNIVERSITY OF SINGAPORE

Singapore

Jan. 2020

- Collaborated in a team of 4 to develop a small, minimalist keyboard with features of a full-sized keyboard, under a constraint of a 24-hour hackathon.
- Designed the keyboard layout, hardware and wrote its accompanying firmware.