TAN JIA YI, ANDREA

Email: E0772496@u.nus.edu| Mobile: (+65) 92953108 | LinkedIn: linkedin.com/in/tanjiayiandrea/

EDUCATION

National University of Singapore   **Aug 2021 to May 2025 (Expected)**
- Bachelor of Science (Honours – Highest Distinction): Major in Chemistry, Minor in Forensic Science
- Achieved NUS Merit Scholarship in 2021 and Dean's List in 2022 and 2023 for outstanding academic achievement
- GPA: 4.78/5.0

University of St Andrews, Semester Exchange Programme   **Jan 2024 to May 2024**
- Attained 19.1/20 for module – "Chemistry of Materials" – and 18.1/20 for "Fragrance, Food and Colour Chemistry".
- Gained cultural insights by interacting with local and exchange students, particularly through their hiking club.

TECHNICAL SKILLS

- Spectroscopy: UV-VIS, FTIR, Raman, ICP-AES, PXRD, Fluorescence Spectroscopy
- Chromatography: HPLC, GC-MS, CE, TLC, Column and Ion Chromatography
- Electrochemistry: Voltammetry, Potentiometry
- Programming Languages: Python, HTML, SQL, R

INTERNSHIP & WORK EXPERIENCES

Gum & Candy R&D Intern, Mondelēz International   **Aug 2024 to Jan 2025**
- Led an independent project investigating production defects of a candy, successfully identifying root causes and thereby making advances to improve production yield.
- Analyzed candy samples using instruments such as rheometers, pH meters, and a_w meters to guide project direction.
- Developed a Microsoft List integrated with Power Automate, ensuring integrity of data collected.
- Supported in benchtop trials and pilot studies cooking jellies and hard-boiled candy to refine recipes and cooking processes, as well as to recommission equipment.
- Managed shelf-life activities (sensory evaluation preparations and analytical tests) to monitor product stability over time.

Electrochemical Intern, Aprisium Pte Ltd   **May 2023 to Aug 2023**
- Experimented with electrochemical systems involving voltammetric techniques, leading to improved metal detection.
- Collaborated closely with the engineering team to test product functionality and optimize usability.
- Reviewed relevant literature resources to improve experimental methods in-use.
- Organised laboratory equipment, chemical stocks, buffers, and experimental documentation for efficient workflow.

PROJECTS & COMPETITIONS

Data Story – "Is the Smell of Fear Real?", Sole Creator   **Dec 2023**
Link: https://andrea-jy.shinyapps.io/datastory/
- Created a data story utilising R to raise curiosity of a possible fear-related compound.
- Analysed a large dataset from multiple aspects to answer the overarching question.

L'Oréal Brandstorm 2023, Team Member   **Mar 2023**
Link: https://jyapple15.github.io/JY_Portfolio/projects/bondbrush.html
- Researched current sensor technologies and hair products to understand resources available for developing our idea.
- Introduced a hairbrush paired with AI to analyse hair conditions and raise awareness of hair and scalp health.
- Designed the appearance of an accompanying application using Canva for optimal user experience.

Web Application – MY Planner, Sole Creator   **Jul 2021**
Link: https://my-planner123.vercel.app/
- Developed a digital planner using Python, HTML, CSS, Javascript, and SQL to promote flexible planning.
- Presented application on YouTube to display and elaborate on available functions.

CO-CURRICULAR ACTIVITIES/VOLUNTEERING EXPERIENCE

Co-Lead Mentor, Singapore Red Cross Centre   **Mar 2023 to Sep 2023**
- Led a team of 5 to plan enrichment activities lasting 0.5-2 hours and encourage learning beyond academics.
- Guided Primary 3 - 4 students in academic work on a 1-to-1 setting and promoted interest in learning.
- Planned a day trip to the Singapore Zoo which was well-received by 20 students.

ADDITIONAL INFORMATION

- Obtained certificate – HarvardX's CS50x: CS50's Introduction to Computer Science (2022)
- Languages: Proficient in English and Mandarin