

## EDUCATION

- Yale University (Graduate School of Arts and Social Sciences) - Connecticut, USA** *Aug 2019 – May 2020*
- Masters of Science in Engineering and Applied Science: Chemical Engineering Specialization
  - Honours for all credit courses
- National University of Singapore (NUS) - Singapore** *Aug 2013 – Jun 2017*
- Major: Chemical Engineering (honours), Highest Distinction
  - Current Cumulative Average Point (CAP)- 4.63/5.00
  - Engineering Dean's List: Top 5% of cohort for 2 semesters
- University of California, Berkeley (Summer) – California, USA** *July – Aug 2015*
- Courses: Finance- A, International Business- A-
- Raffles Institution (Junior College) - Singapore** *2011 – 2012*
- Completed GCE A levels (AAA/A)

## WORK EXPERIENCE

- Teaching and Research Assistant at Rutgers University - NJ, USA** *Nov 2019 – current*
- Working alongside my PhD students in applying computational tools techniques using Matlab/Simulink perform to research problems. Assisting in development of teaching material for a Matlab based course.
- ExxonMobil Chemical Operations – Process Engineer (Chemical Processing) – Singapore** *July 2017 – Aug 2019*
- Provided technical support to production using sound engineering principles and statistical analysis in-order to troubleshoot process issues and evaluate opportunities for process improvements in aromatics plant.
  - Led 15-member international technical team, through planned downtime activities in extraction unit. Through close coordination with cross-functional teams, planned downtime was successfully completed right first time and 3 days ahead of scheduled completion. 3 weeks delay could have lead to US\$18 million loss opportunity.
  - Experience in process automation and optimization in manufacturing setting.
  - Involved in process improvement project (including Pro II simulations and process design calculations)
- ExxonMobil Chemical Operations – Technical Intern in Aromatics Plant - Singapore** *July – Dec 2016*
- Performed problem identification, credit evaluation, constructability analysis and design calculations using in-house process design software for two new independent improvement projects valued at combined annual savings of up to US\$0.5 million. Project includes design and selection of equipment and auxiliaries.
  - Developed energy target for optimization of process units, through detailed analysis of 2-year plant data.

## RESEARCH/PROJECT EXPERIENCE

- Masters Special Investigation: Study of nucleation of water and organic liquid interfaces** *Jan – current*
- Characterization of organic liquid interfaces using Monte Carlo and Molecular Dynamic simulations using C.
  - Determination of thermodynamic driving force for nucleation of high-density liquid water using LAMMPS.
- Final Year Design Project: Design and analysis of Methanol-to-Olefins Plant - Singapore** *Jan – Jun 2017*
- Designed cryogenic distillation with demethaniser to separate methane and hydrogen from ethylene stream.
- Final Year Project: Palladium nanoparticle synthesis with millifluidic reactors - Singapore** *Jan – Jun 2016*
- Attained 3-fold increase in throughput for synthesis of palladium nanoparticles using continuous millifluidic reactor systems for joint project between Matralix Pte. Ltd. and Johnson-Matthey.
  - Experience working with chemical safety, handling chemicals and pressurized gases.

## RELEVANT SKILLS

MATLAB/ Python/ C  
Process Engineering/ Improvement

Process Optimizations (GAMS)  
Process Simulations (Pro II/ Aspen Suite)