Rachel Seng Charoenthammanon

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EDUCATION

Duke-NUS Medical School, Singapore   *July 2019-July 2026 (anticipated)*
- Dual MD-PhD Medical Scientist Training Program (MSTP)
- Lee Foundation Scholarship Recipient
- SIA-NUS Digital Aviation Corp Lab Research Scholarship Recipient

Northwestern University Weinberg College of Arts and Sciences, Evanston, Illinois   *September 2015-June 2019*
- *Bachelor of Arts* in Biological Sciences, Pre-medical Track, 2nd Major: Computer Science
- *Awards:* Dean's List 7 quarters

CO-CURRICULAR ACTIVITIES and LEADERSHIP EXPERIENCE

Certified Red Cross Ambassador   *January 2021-Present*
- Trained in Standard First Aid & CPR/ AED, and BCLS certified

Senior Lecturer and Committee Member for Mock OSCE for Juniors   *September 2020-November 2020*
- Drew up a teaching plan with two other students to give a high-yield crash course lecture on the cardiovascular system
- Lecture was intended to highlight the pertinent points in the course curriculum and to provide the students with a solid foundation of the cardiovascular system prior to their officially scheduled classes conducted by faculty members
- Created OSCE questions from all systems as a mock test for juniors, and was system lead for Cardiovascular and Reproductive systems, in charge of revising these topics

Student Council Class Secretary for Class of 2023   *August 2019-September 2020*
- Key decision maker and class advocate in administrative issues pertaining to the class
- Scribed and vetted written communications that are broadcasted to the class
- Spearheaded the organization of events such as the school-wide annual Christmas party and class welfare events

Class of 2024 Orientation Chair and Student Buddy   *August 2019-September 2020*
- Recruited 25 senior medical students as facilitators and game masters to assist in the execution of the orientation session
- Organized a fun and informative 2-hour virtual Zoom orientation session for the 72 new students of the Class of 2023 that was intended to welcome them into the Duke-NUS community, give them an opportunity to bond with each other, and answer their queries or direct them to the appropriate academic and social resources available to them
- Volunteered to be paired with an international student to be a "Senior Buddy", whose role is to regularly check in on their assigned "Junior Buddy" and ease them into the new culture and environment as seamlessly as possible

PROFESSIONAL EXPERIENCE

Holmgren Lab Research Assistant, Northwestern University Molecular Biosciences   *September 2016- January 2019*
- Studied published papers on the process of pattern formation during animal development, with a focus on the Hedgehog signal transduction pathway in *Drosophila*
- Designed and carried out own lab experiments, and collaborated with other RAs on a larger scale project
- Dissected *Drosophila* wing discs, stained with antibodies, fixed and imaged them on Leica Spinning Disc (certified), and processed obtained images on ImageJ

Teacher's Assistant for EECS330 Human Computer Interaction, Northwestern University   *January – June 2018*
- Led a weekly studio section of 20 students for 2 quarters, reinforcing content that was taught in lectures
- Held office hours to assist and guide students struggling with class content or homework assignments
- Graded assignments and provided constructive feedback on students' quarter-long projects on interface development

Luo Yuan Group (LYG) Lab Research Assistant, Northwestern University Feinberg School of Medicine   *May – August 2017*
- Applied imputation techniques (mean imputation, MICE imputation and MissForest imputation) and machine learning techniques (support vector machines, logistic regressions, decision trees, random forests, artificial neural networks, naive Bayes, and Bayesian networks) to analyze clinical laboratory test results relating to cardiovascular disease
- Tested hypothesis that patient demographics and results of other laboratory tests have measured alongside target test results by imputing results for missing predictor tests

Presence Saint Francis Hospital Volunteer, Evanston, Illinois   *April 2016 – January 2019*
- Engaged with patients during discharge and rotations to provide holistic care beyond medical treatment
- Served as a floor front desk switchboard operator to answer queries and relay patient requests to nurses
- Consolidated patients' health histories and paperwork from different healthcare providers into an electronic filing system

MEDLIFE Mobile Clinic Service Learning Trip Participant, Cusco, Peru   *March 19- March 25, 2017*
- A member of a team of 20 students from various MEDLIFE chapters across US universities that travelled to Cusco for a week to join 5 local and international doctors and 5 on-ground MEDLIFE personnel
- Exposed to social inequity in a third world country where access to basic health services is severely limited
- Purpose is to empower the poor by assisting them in building a sustainable infrastructure that allows equal access to healthcare, education, and a safe community
- Did construction work such as building staircases for easier accessibility to upper floors of a house, extra rooms to minimize overcrowding in a home, partition to separate a kitchen from a bedroom
- Shadowed doctors and dentists, and assisted them as needed
- Taught children and adults the skills and importance of tooth-brushing, proper nutrition, the dangers of cardiovascular disease, and the need for routine mammograms and pap scans, with the goal of providing community-tailored healthcare

TECHNICAL SKILLS AND INTERESTS

Laboratory: Light Microscopy, Spinning Disk Confocal Microscopy, CITI certification
Computer: Python, C++, C#, HTML, Javascript, R Studio, DrRacket, Adobe Photoshop and Indesign, Microsoft Office
Languages: Fluent English, Thai and Conversational Mandarin