RESEARCH TRAINING PLAN

Name	:	Zi-Yi, ZHANG
Home University	:	Southern University of Science and Technology
Research Title		DTR (dynamic treatment regime)
Supervisor (at NUS)	:	Bibhas CHAKRABORTY
Host Department/Faculty/School	:	Centre for Quantitative Medicine, Duke-NUS Medical School
Schedule/Time Frame/Duration	:	2021.01 - 2021.04

Introduction, Objective and Outputs	DTR, a sequence of decision rules based on evolving treatment and patient's history status, is an increasingly developing idea in clinical science. In the next-year project, I would try to have an overview of the methodology in the whole DTR process, especially in the field of SMART, optimal techniques like Q-learning, and the inference of DTR.
Material and Methodology	Most materials needed are relevant papers in the field of DTR. While the data used for analysis is mainly gathered from some open databases like PubMed.
Expected results and output	Expected: Identify and develop DTRs to open data and inference the outcome, where most relevant methodologies and technologies should apply.
Research plan and timetable	Before the project, build up a solid statistical foundation. In the first month, get familiar with various fields and techniques in DTR by reviewing former publications, besides, keep an eye on the data available and proper for analysis. Next stage, participate in the research in the data.
Links to other relevant activities	Seminar of the gait disturbances in Parkinson's disease Survival analyze course