# LKCMedicine PhD Research Project Submission Form

## Research Theme (Please indicate as appropriate)

| ☐ Dermatology & Skin Biology | ☐ Family Medicine & Primary Care |
| ☒ Health Systems & Population Health | ☐ Infection & Immunity |
| ☐ Metabolic Disorders | ☐ Neuroscience & Mental Health |
| ☐ Medical Education | ☐ Others (Please specify): |

## Research Project Title:

Development and evaluation of a digital psychological wellbeing coach

## Project Description:

The burden of mental health disorders is substantial and continues to grow. The COVID-19 pandemic has had additional detrimental impact on mental health and wellbeing worldwide. However, the availability of healthcare and counselling services offering treatment and prevention of mental health disorders is limited both in Singapore and internationally. Smartphone-delivered and personalized health interventions, such as those delivered via conversational agents, may enable delivery of preventative interventions for mental disorders at scale and low cost.

The aim of this doctoral project will be to co-develop and evaluate the effectiveness of a mobile phone-delivered conversational agent for prevention of depression among young people. This project is a collaboration with ETH Zurich, Switzerland. We are offering two PhD studentships.

## Brief summary of main Methodologies and/or Techniques to be learned during the proposed PhD (experimental or analytical):

This project will expose students to a variety of disciplines including clinical sciences, public health, digital health, data analysis, psychology, computer sciences, etc. The student will also become familiar with a range of different research methodologies: clinical trials, evidence synthesis, qualitative research, evaluation of digital interventions, etc. This doctoral project will foster development of competences that are imperative for an academic, public sector or industry career in digital health and evidence-based healthcare including formulation of research question, critical appraisal of the literature, evaluation of complex interventions,
economic analysis, data analysis and interpretation. It will also enable development of a range of generic skills such as academic writing, communication, team working, and project management.

**Keywords:**  
Mental health, digital health, conversational agent, chatbot, depression, coach
**Supervisor(s)**

**Primary Supervisor**

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<thead>
<tr>
<th>Name of Supervisor:</th>
<th>Lorainne Tudor Car</th>
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<tbody>
<tr>
<td>Designation:</td>
<td>Asst Prof</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:Lorainne.tudor.car@ntu.edu.sg">Lorainne.tudor.car@ntu.edu.sg</a></td>
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**Co-Supervisor (need not be determined at this time)**

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**Main Location of Research Work (Please indicate as appropriate)**

- [☐] LKCMedicine Experimental Medicine Building @ Yunnan Campus
- [☒] LKCMedicine Clinical Sciences Building @ Novena Campus
- Others (Please specify):  

**Other Information**

1. Does the proposal need IRB’s approval?  
   - [☒] Yes  
   - [☐] No
   
   If “Yes”, is the IRB’s approval in place?  
   - [☐] Yes  
   - [☒] No

2. Does the project involve contact with patients?  
   - [☐] Yes  
   - [☒] No

3. Does the project involve contact with animals  
   - [☐] Yes  
   - [☒] No
   
   If “Yes”, is the NTU-Institutional Animal Care and Use Committee approval in place?  
   - [☐] Yes  
   - [☐] No

4. Is there a potential for overseas academic exchange as part of this research project?  
   - [☒] Yes  
   - [☐] No

   If “Yes”, please specify:  
   This is a collaborative project with ETH Zurich and students will have an opportunity for a short academic visit to our collaborator should the COVID 19 pandemic-related circumstances allow for travel.