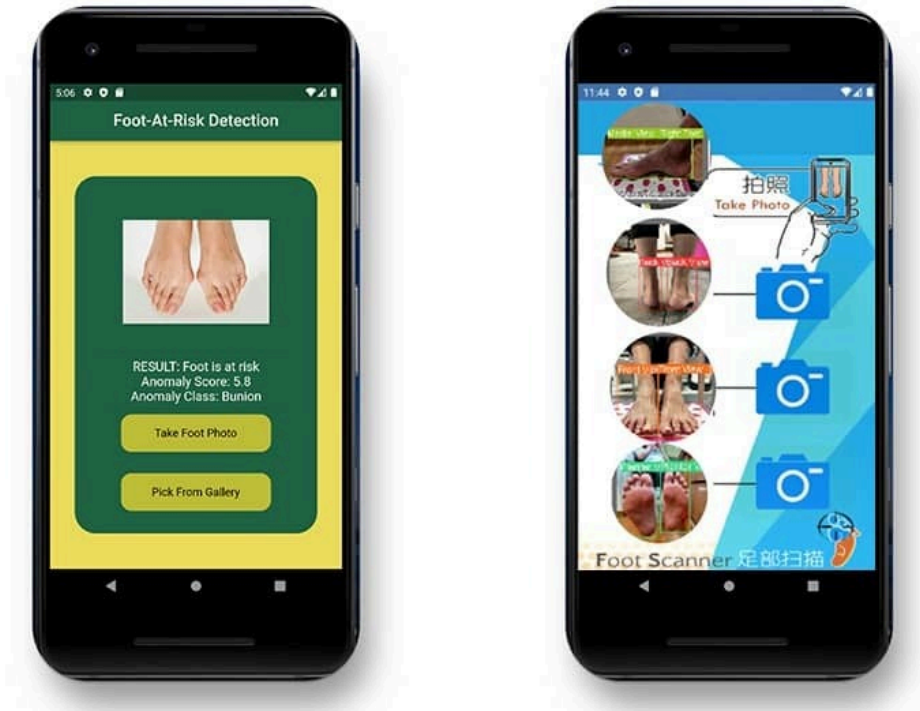**TECH OFFER**

Diabetic Foot Ulcers (DFU) Risk Detection and Management

KEY INFORMATION

TECHNOLOGY CATEGORY:
Healthcare - Telehealth, Medical Software & Imaging

TECHNOLOGY READINESS LEVEL (TRL): **TRL4**
COUNTRY: **SINGAPORE**
ID NUMBER: **TO174892**

OVERVIEW

Diabetes is associated with macrovascular and microvascular complications, including Diabetic Foot Ulcers (DFU). To identify and manage DFU risk, diabetic patients are recommended to go for a regular foot assessment. Patients who are at-risk diabetic foot should undergo regular podiatry evaluation, however specialised diabetes centers are currently facing high rates of ulcer recurrence. Frequent visits to these centers can strain an already overwhelmed healthcare system.

The technology developer has invented an Artificial Intelligence (AI) model that is able to detect pre-ulceration. By detecting feet at risk of developing DFU, the model is able to refer patients for timely intervention before it becomes a DFU. Users only need to submit photos of their feet from different angles and an anomaly score will be calculated.

TECHNOLOGY FEATURES & SPECIFICATIONS

- The Artificial Intelligence (AI) model is trained to detect pre-ulceration

- Level of risk can be determined and reflected as scores
- Able to detect the class of anomalies and classification of data can be modified in the future

POTENTIAL APPLICATIONS

- Hospitals / Clinics
- Medical Device Manufacturers
- Pharmaceutical Companies
- Insurance Providers

UNIQUE VALUE PROPOSITION

- Serve as first level of screening for the users – allowing more frequent evaluation without overwhelming the healthcare system
- Enable self monitoring
- Semi-supervised approach for AI model training
- On-device inference providing increased privacy and security
- Easy-to-use cross platform mobile application