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Research Group Health Informatics



KEANGGOTAAN



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Description



Health Informatics

Description

Health Informatics research group aims at developing methods and technologies for the acquisition, processing, and study of patient data, which can come from hospital information system or user personalized data from wearable devices / application.

Our Mission



Health Informatics

Vision

Improve the health using computation and application based on machine learning method

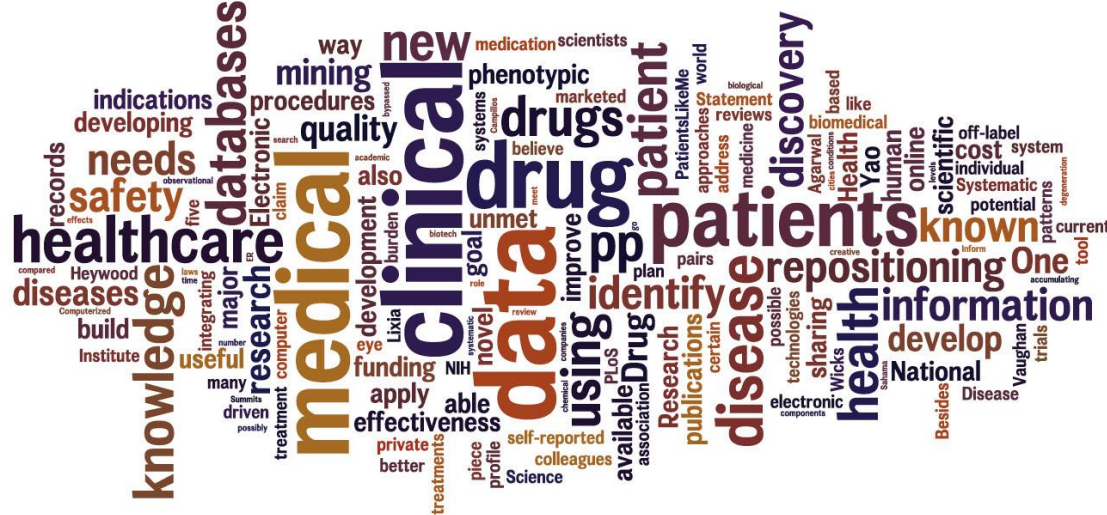
Mission

- Our application help people achieve more and live better life
- We provide comprehensive health, wellness and fitness solution
- Study about a more personalized and insightful health experience



Health Informatics

1. Clinical care
2. Administration of Health Services
3. Medical research
4. Education and Training
5. Mobile apps and new health platform based on wearable device



Clinical Care

Clinical care decision-making or Clinical Decision Support System (CDSS)

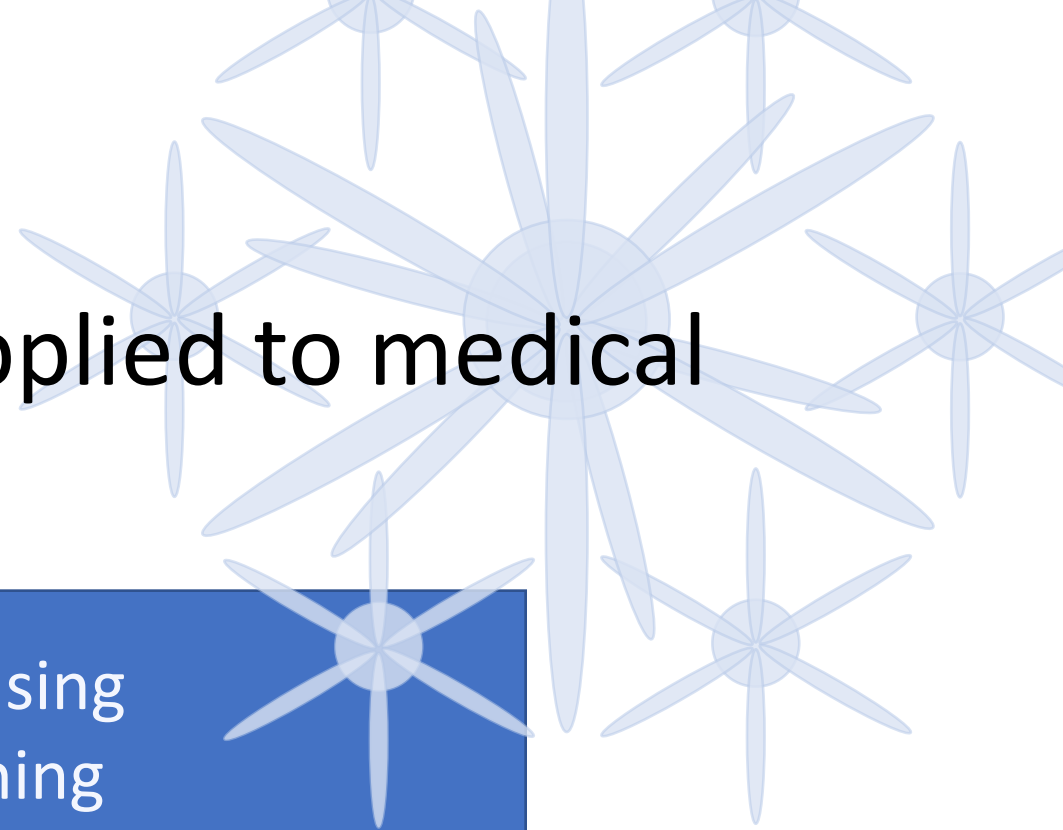
- Information retrieval:
- Alerting systems:
- Reminder
- Suggestion Systems
- Prediction Modelling

Physiological Parameters	3	2	1	0	1	2	3
Respiration Rate (BPM)	≤8		9-11	12-20		21-24	≥25
Oxygen Saturations (%)	≤91	92-93	94-95	≥96			
Any Supplemental Oxygen		Yes		No			
Temperature (°C)	≤35		35.1-36.0	36.1-38.0	38.1-39.0	≥39.1	
Systolic Blood Pressure (mmHg)	≤90	19-100	101-110	111-219			≥220
Heart Rate (BPM)	≤40		41-50	51-90	91-110	111-130	≥131
Level of Consciousness				A			V, P or U

Medical Research

Machine Learning techniques applied to medical research

- Improving stroke diagnosis accuracy using hyperparameter optimized deep learning
- Segmentation stroke objects based on CT scan image using thresholding method
- Detection of Lung Cancer Cell Based on Cytological Examination Using Convolutional Neural Network



Mobile apps and new health platform
based on wearable device

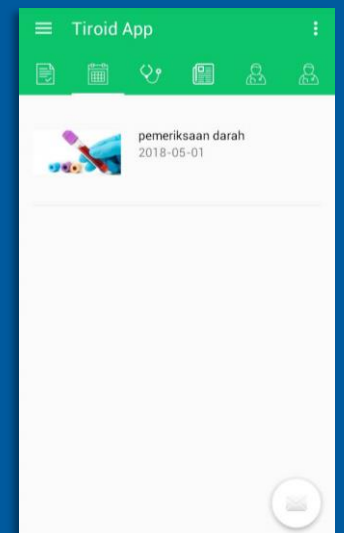
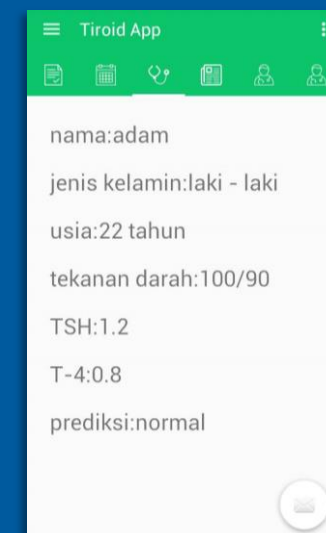
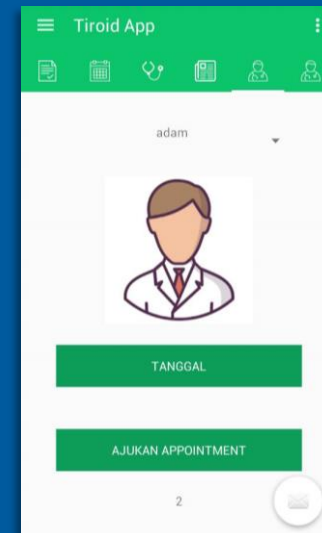
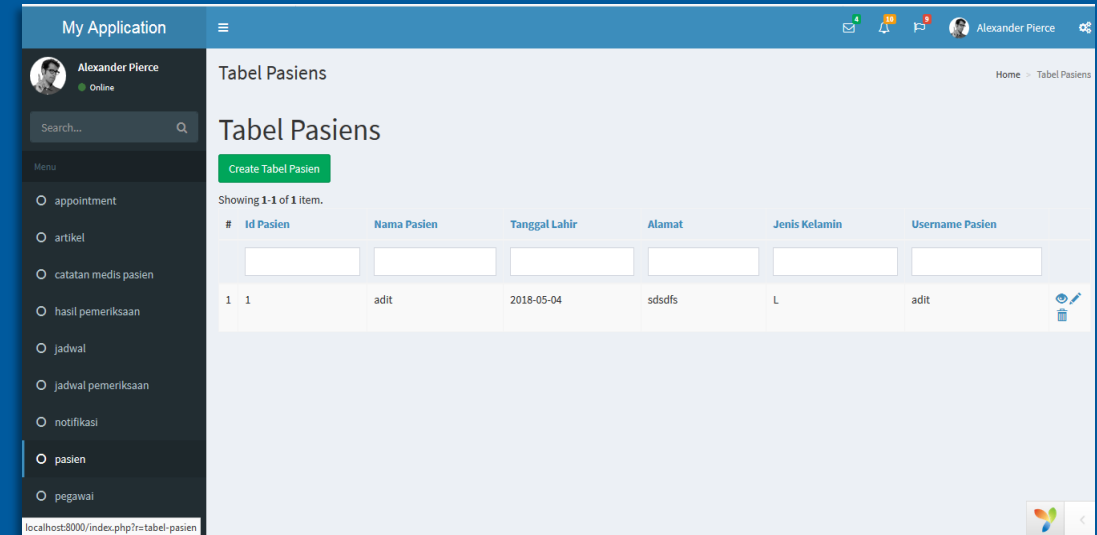
Mobile Health Application

Telemedicine – HealthApp

**New Health Platform based on
wearable Device**

Mobile health application

**PENGEMBANGAN APLIKASI M-HEALTH UNTUK
PERSONAL HEALTHCARE PENDERITA GANGGUAN
TIROID DENGAN PREDIKSI TINGKAT RESIKO
MENGUNAKAN DECISION TREE**



Personalized Health Experience

1 | Mempermudah Diagnosa

Merancang aplikasi perangkat lunak yang akan mempermudah proses diagnosa jenis gangguan penyakit

2 | Mempermudah Akses

Desain perangkat lunak dan distribusi data yang akan memberikan kemudahan pada tenaga medis maupun pasien dalam mengakses data.

3 | Mempermudah Monitoring

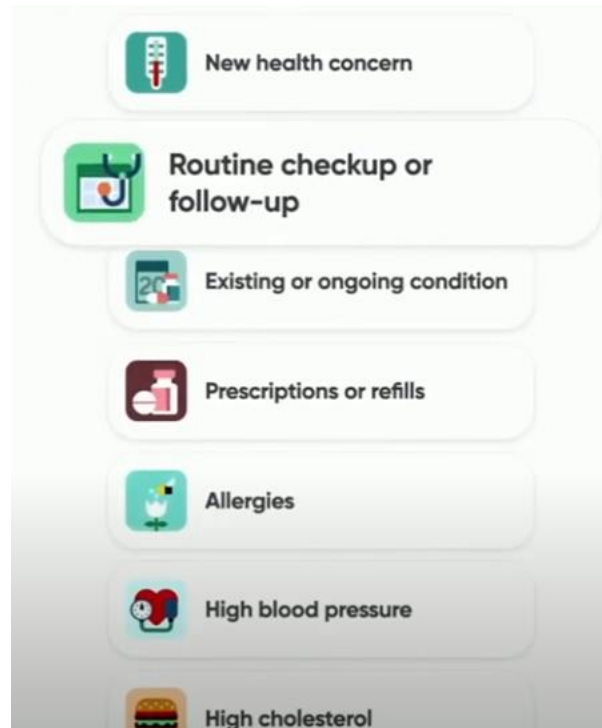
Aplikasi akan mempermudah tenaga medis dalam melakukan pengawasan terhadap perkembangan penyakit



Telemedicine - developing HealthApp

HealthApp

“HealthApp” is medical clinic platform, connecting the doctor and patients



New Health Platform based on wearable Device

Samsung privileged health SDK

Tracking sensor data for On-device data analytics





**THANK YOU,
FOR YOUR ATTENTION !**

