



Human Exercise Recognition using a **CNN**

2016 Spring CSED499 Senior Research Projects

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No	Content
1	Project Description
2	Schedule



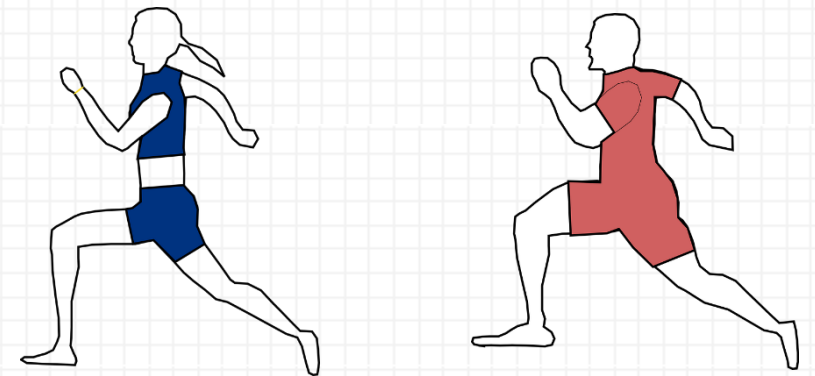
Project Description

Goal & Purpose

✓ Goal: Developing a system for human exercise recognition

✓ Why?

- To study CNN based algorithms of classification for real-time data
- I'm a user of smartwatch device
- Just for Fun!



The goal of this project is developing a smart watch application for human exercise recognition

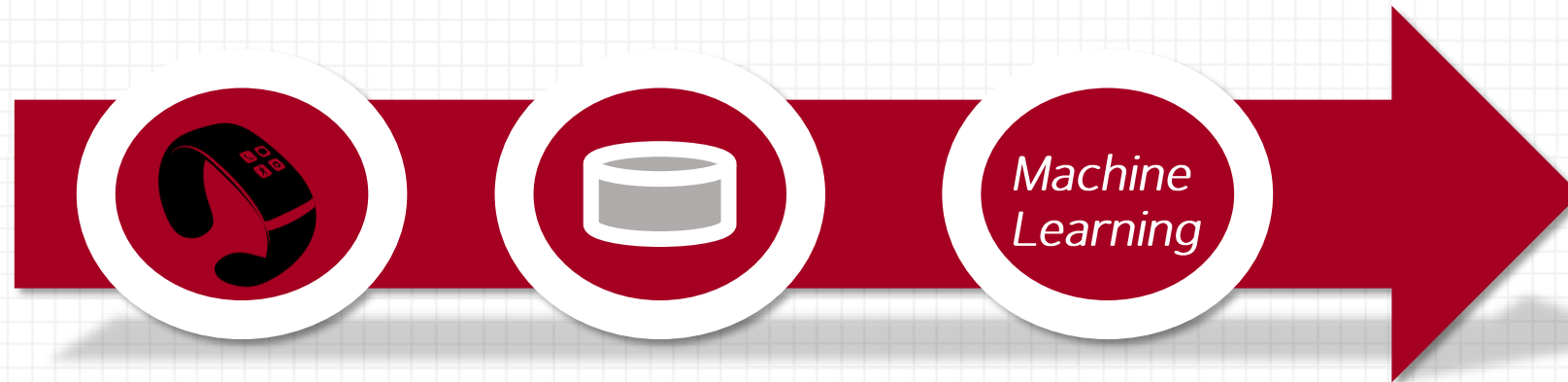


Project Description

Method

✓ How to implement this system?

- Design CNN(Convolutional Neural Network) based an algorithm of exercise recognition using inertia sensors on smart watch
- Construct a database for each kind of exercise on a wide variety of people
- Develop an application for real-time recognition with Smartwatch SDK



Develop Smartwatch application for real-time exercise recognition using CNN based an algorithm



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✓ Period: 21. Mar ~ 6. Jun (11 Weeks)

Activity	1	2	3	4	5	6	7	8	9	10	11
Research Situation Analysis & Information Gathering	Active	Active	Active	Passive	Passive	Passive	Passive	Passive	Passive	Passive	Passive
Study a Basic Knowledge	Active	Active	Active	Passive	Passive	Passive	Passive	Passive	Passive	Passive	Passive
High-level Design	Passive	Passive	Passive	Active	Active	Active	Passive	Passive	Passive	Passive	Passive
Detailed Design	Passive	Passive	Passive	Passive	Active	Active	Active	Passive	Passive	Passive	Passive
Implement Smartwatch Application (Prototype)	Passive	Passive	Passive	Passive	Passive	Active	Active	Active	Active	Passive	Passive
User Data Collection	Passive	Passive	Passive	Passive	Passive	Passive	Passive	Active	Active	Passive	Passive
Test & Debug	Passive	Passive	Passive	Passive	Passive	Passive	Passive	Passive	Active	Active	Active
Poster Presentation to the CSE Professors and Students	Passive	Passive	Passive	Passive	Passive	Passive	Passive	Passive	Passive	Active	Active
Demo & Submitting Final Report	Passive	Passive	Passive	Passive	Passive	Passive	Passive	Passive	Passive	Passive	Active

Develop Smartwatch application of human exercise recognition based on CNN
and put on a demonstration with Smart Watch

End of Document

Thanks for your attention