Ubiquitous and Mobile Computing
CS 528: Final Project Report

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Motivation

A recent study found that the average woman, in the course of her lifetime, spends *almost one year* standing in front of her closet deciding what to wear.

What if there is an app can help people manage their closet...
Motivation-Tengyang’s’s story

Tengyang gets up and finds himself late. He gets up and puts on the outfits he dressed yesterday.

The temperature dropped down dramatically so he feels cold all day. What's worse, he has to go to an interview wearing short pants.

He needs an app than can remind him what to wear every day.
Related Work

- People’s clothing behaviour according to external weather and indoor environment
- Book of Colors: Matching Colors, Combining Colors, Color Designing, Color Decorating
- App: Closet+ an iOS app
Features Overview

- **Weather**
  - OpenWeatherMap api
- **Schedule**
  - Formal / casual
- **Virtual Closet**
  - Help manage outfits
  - Classification
  - Color, type, style
Architecture

Diagram:

- Camera
- Gallery
- Database
- Schedule
- Weather

Flow:

- Schedule Filter
- Weather Filter
- Color Filter

Connection:

- Camera to Database and Schedule
- Gallery to Database
- Schedule to Database and Clothes Suggestion
- Weather to Clothes Suggestion
Methodology - suggesting algorithm

Return the clothes matching plan with the highest score.
Methodology - color filter

harmonious and beautiful
Methodology - color filter

Average colors of four sampling points and calculate the distance between the colors of different clothes
Implementation
Implementation: Closet

Add Cloth

- Hat Moderate
- Hat Cold
- Top Hot
- Top Moderate
- Top Cold
- Bottom Hot
- Bottom Moderate
- Bottom Cold
- Shoe Hot
- Shoe Moderate
- Shoe Cold
Implementation: Schedule
Implementation: Alarm

- **Active**: Yes
- **Label**: Alarm Clock
- **Set time**: 14:55
- **Ringtone**: Sound of the sea
- **Vibrate**: Yes

Image shows a forest background with the text: "GET UP, DERSS UP, SHOW UP AND NEVER GIVE UP".
Implementation: Weather

Worcester, US

14.3 °C
Clear sky
Wind: 6.2 m/s →
Pressure: 1011.0 hPa
Humidity: 30%

TODAY  TOMORROW  LATER

Wed 27.04.2016 - 17:00
Clear sky
Wind: 3.6 m/s →
Pressure: 993.5 hPa
Humidity: 30%

14.7 °C

Wed 27.04.2016 - 20:00
Clear sky
Wind: 3.6 m/s →
Pressure: 993.8 hPa
Humidity: 30%
Evaluation

- User study: user satisfaction
Question?