Inferring Product Innovation Through Similarity Computation

P01A

Team's Roles

MINGCUN HUANG: Manager, Doomsayer

PEIQI HUANG: Tracker, Customer

YUHE JIANG: Programmer, Tester

YANXIAO LI: Programmer, Tester

ZIYUAN LIU: Programmer, Tester

KESHAV AGARWAL: Programmer, Tester

XP Methodology - Agile Software Development

- Whole team
  - Weekly group meeting: Manager
  - Weekly meeting with client: Customer
  - project management: Bitbucket & Google drive & Slack

- Test-Driven Development: Tester

- Pair Programming: Programmer

Project Introduction

Client: Monireh Alsadat Mirtalaie (UNSW - Canberra)

Project idea: identify products that are related or similar to our product and then determine what new features can be imported.

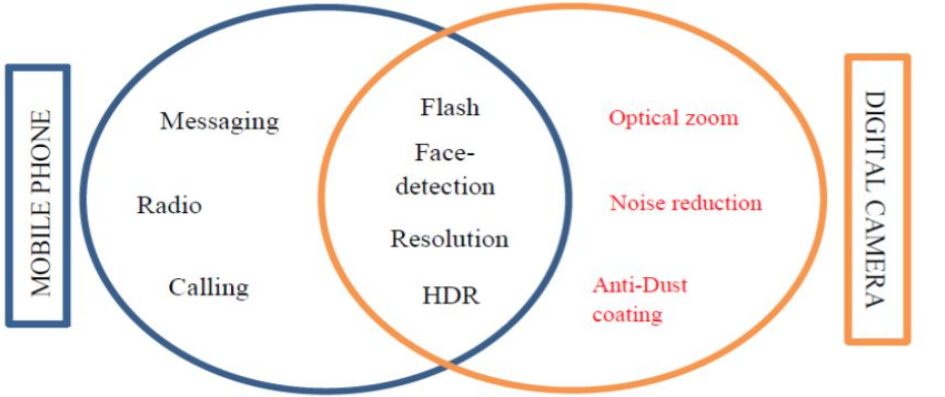


Figure 1: Comparing features of a mobile phone with a digital camera

User Story - User

As a product developer, I want to select a reference product so I can compare it with other products to find possible features that can be added to it.

As a product developer, I want to select other products level by level so I can compare them with a reference product to find possible features that can be added to the reference product.

As a product developer, I want to see features of the specific models of the selected products.

User Story - Administrator

As a database manager, I want to maintain the database, so the data is always available to the users.

As a database manager, I want to update the database, so the data is always up-to-date.

As a database manager, I want to have the only authority to control the database, so users cannot have access and modify data without authorization.

As a web-staff, I want to give some users special authority so that they can help me manage the website.

Project Overview

1) Create a database for the given list of products.

2) Create an interface for user to select product and model.

3) Extract all single words from specification documents of the reference product and shortlist products as their features.

4) Generate a matrix of reference product's features.

Project Overview

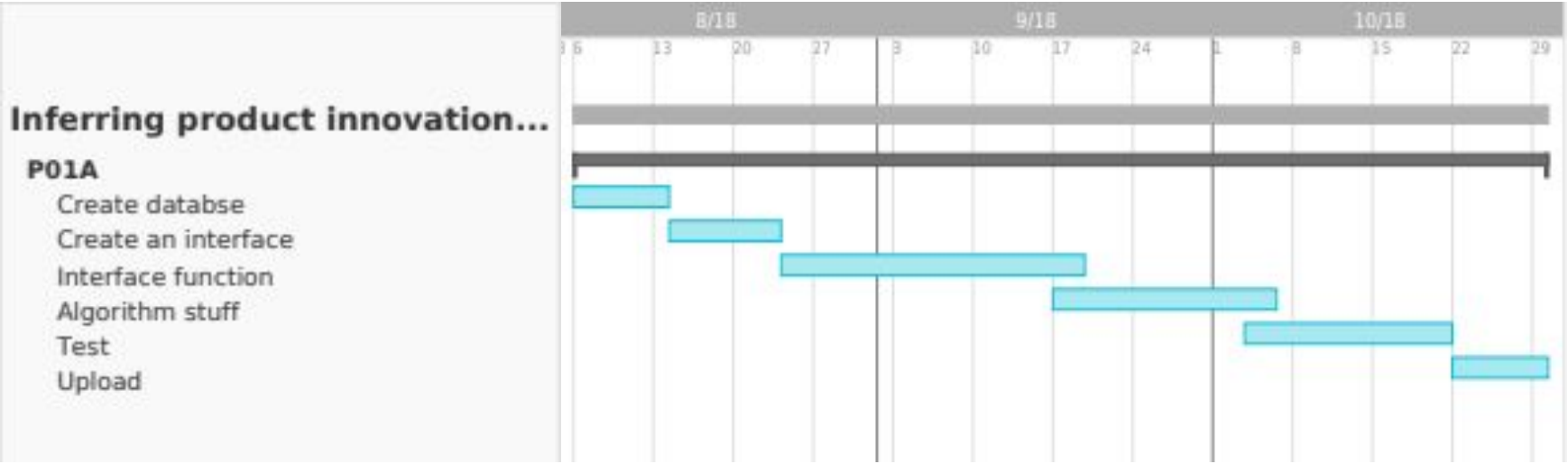
5) Compute similarity between reference product and shortlist ones

6) Ask the user to set thresholds for recognising related / similar / non-related products

7) Present a list showing the “Related products”

8) Generate a revolution list

Gantt Chart


8/18
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Inferring product innovation...
P01A
Create databse
Create an interface
Interface function
Algorithm stuff
Test
Upload

Project Plan - Current Stages

Using XP methodlogy: Small develpment cycle and frequent release

Project stage 1: Project preparation + First-phase product release

Target: Understanding client's requirements, selecting appropriate programming language (php, HTML, SQL, python)and tools (WampServer), building first-phase product

Deliverable: Interface connected to a database which allows user to select products in a given list.

Schedule: Week 1-4

1

Select Your Reference Product

Samsung Galaxy 3

View Reference Category

You have selected : Samsung Galaxy 3. Its category is: Electronic. Click on button below to pick target

Next

2

Select You Interested Categories

- [ ] Animals & Pet Supplies (108)
- [ ] Apparel & Accessories (161)
- [x] Arts & Entertainment (91)
- [x] Baby & Toddler (70)
- [ ] Business & Industrial (168)
- [ ] Cameras & Optics (78)
- [ ] Electronics (271)
- [ ] Food, Beverages & Tobacco (182)
- [ ] Furniture (97)
- [ ] Hardware (414)
- [ ] Health & Beauty (169)
- [ ] Home & Garden (674)

3.1

First Level Product

Arts & Entertainment

- [ ] Event Tickets (1)
- [x] Hobbies & Creative Arts (49)
- [ ] Party & Celebration (41)

Baby & Toddler

- [x] Baby Bathing (2)
- [ ] Baby Gift Sets (1)
- [ ] Baby Health (5)
- [ ] Baby Safety (6)

4

You've picked the following products:

MusicalKeyboardAccessories
BabyBathtubs&BathSeats

Back

Project Plan - Next Stages

Projet stage 2: Refactoring + Second-phase product release

Target: Refactoring current product based on client's feedback, develop more advanced functionality

Deliverable: Implementing a algorithm that can extract features from a excel form based on rules

Schedule: Week 5-8

Project stage 3: Refactoring + Final product release

Target: Refactoring current product based on client's feedback, implementing all required functionality

Deliverable: an algorithm based on NLP which classifies the various features of a selected product according to their similarity with that of the features of the reference product.

Schedule: Week 9-13

Individual Contribution - Manager & Doomsayer

- Organise group meeting
- Set weekly agenda for the team
- Assign task to each team member
- Make sure work is done within schedule
- Some programming

Individual Contribution - Tracker & Customer

- Organise meeting with client
- Understand client’s demands and give team client’s feedback in time
- Track team’s meeting
- Some programming

Individual Contribution - Programmer & Tester

- Pair programming: (Yanxiao & Yuhe, Ziyuan & Keshav)
    - Programmer: Building product's functionality that meets client's demands.
    - Tester: Review and testing, make sure any bug is fixed before product delivery.

Thank You!