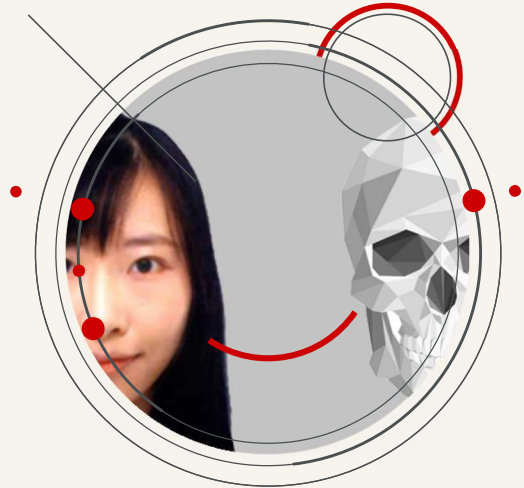


Postdoctoral Researcher / Indie Game Developer / Semi-Professional Novelist



RUOWEI XIAO PORTFOLIO

萧若薇
个人作品集



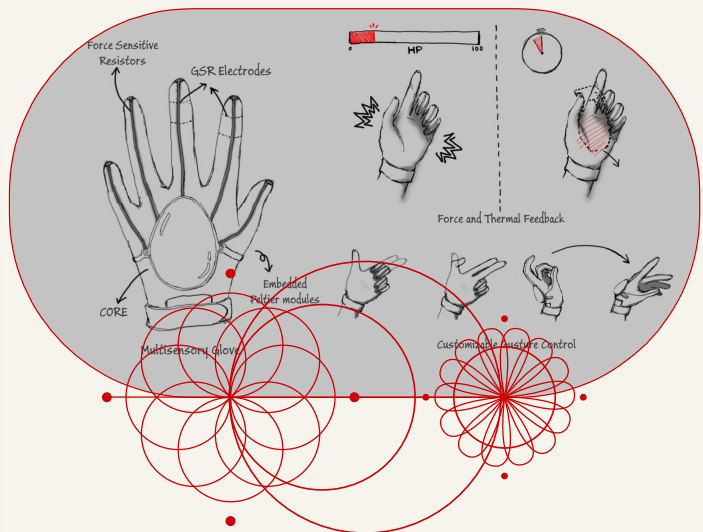
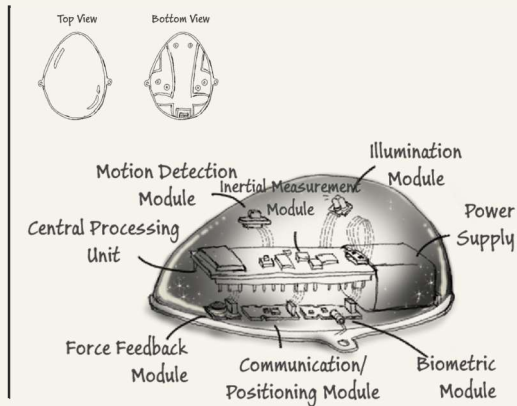
1

A BUSINESS FINLAND FUNDED PROJECT

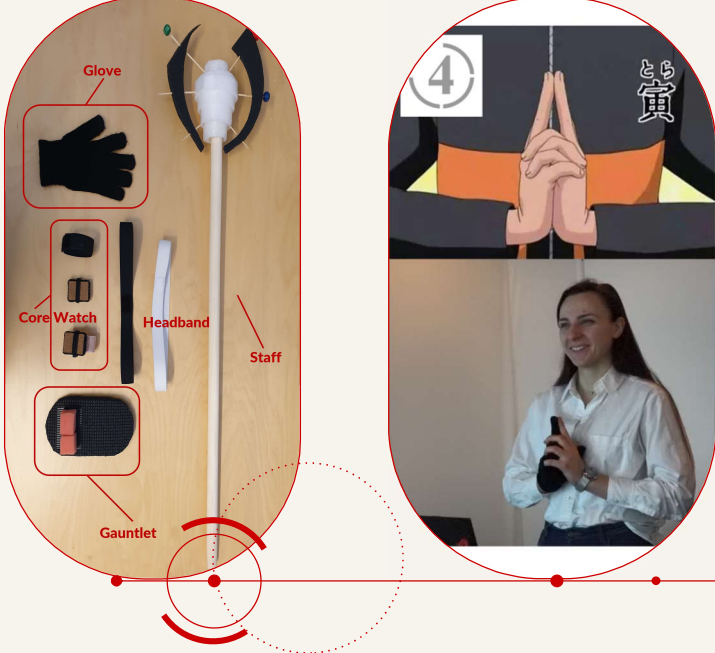
2019-2021

Project: GARMENT 可穿戴智能游戏设备

01. Conceptual Design 概念设计
Keywords: Modular Design, Storyboard
关键字：模块化设计，故事板




2



02. Experience Prototype 体验原型
 Keywords: Low-Fidelity Prototype, Dirty Code, Wizard of Oz

关键字：低精度原型，快速代码
WoZ用户实验

3



03. Data Analysis 实验数据分析
 Keywords: Thematic Analysis, Affinity Graph
 关键字：主题分析，亲和图法

04. Functional Prototype 功能原型
 Keywords: High-Fidelity Prototype
 关键字：高精度原型

4

Editor Location Events Search for Location Search

AN ONGOING PROJECT SINCE 2020

Project: OutdoorVR 户外虚拟现实

01. High-Precision Positioning Module
高精度户外定位模块

Keywords: Real Time Kinematic (RTK)
关键字：实时动态技术

Compared with traditional GPS, RTK enhances the outdoor positioning precision from around 10 meters to centimeter level. This study simplified the hardware and software design, increased the overall mobility and adapted RTK to a more complex, dynamic urban environment.

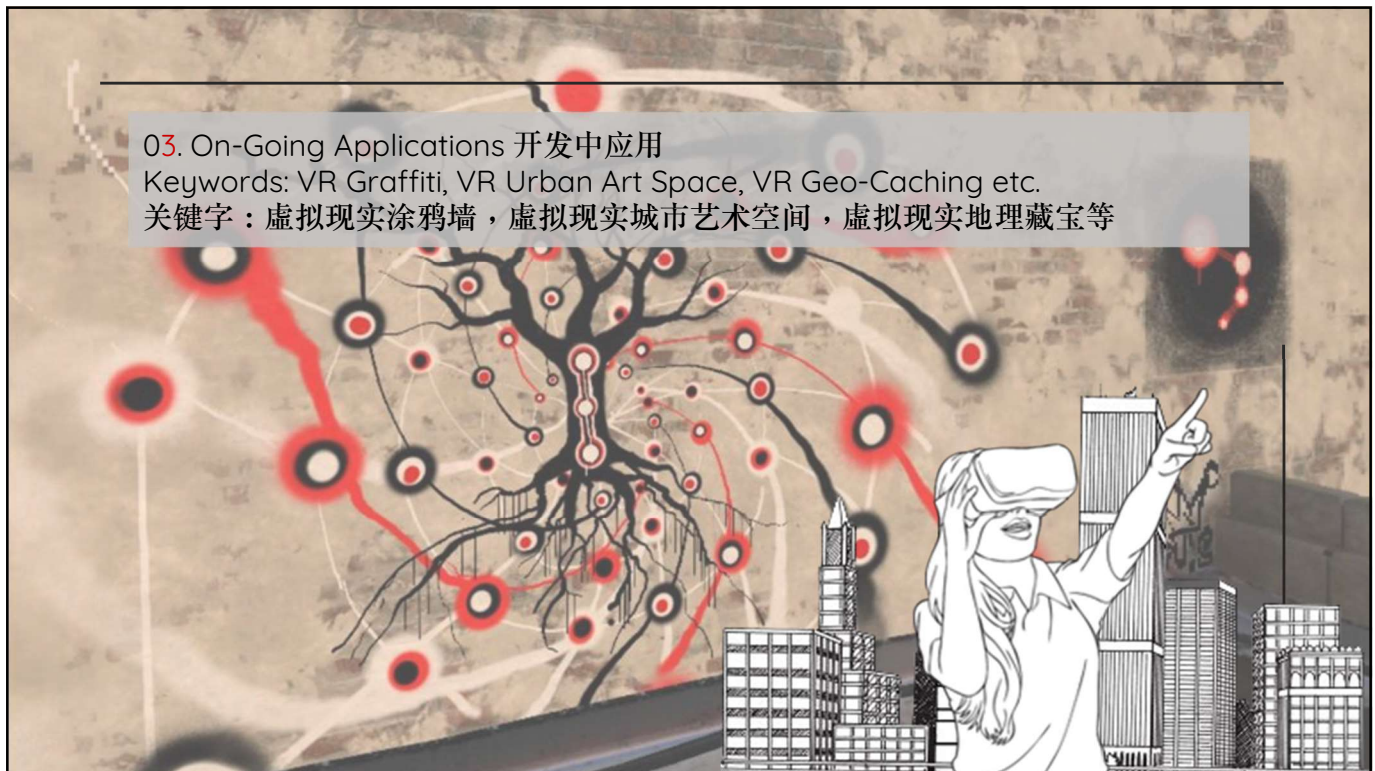
实时动态技术将全球导航卫星系统的室外定位由传统的数米至十数米提升至厘米级别精度。基于该技术，本项目简化了相关的软硬件架构设计，提升了整体可动性，使其更适合在复杂而动态的城市环境中被使用。

5

02. Outdoor Virtual Reality 户外虚拟现实

Keywords: Google Cardboard VR Goggles, Unity, Google Maps 3D
关键字：Google Cardboard头戴式显示器，Unity开发引擎，Google 3D地图

6



03. On-Going Applications 开发中应用

Keywords: VR Graffiti, VR Urban Art Space, VR Geo-Caching etc.

关键字：虚拟现实涂鸦墙，虚拟现实城市艺术空间，虚拟现实地理藏宝等

7

PH.D RESEARCH, A MEXT FUNDED PROJECT

2014-2018

Project: HyperSensorMarkupLanguage

超传感器标记语言

```
<loc attribute = VALUE data_service = OPTION></loc>
<lnk mapping_function = METHOD("PARAMETER")></lnk>
```

Keywords: Internet of Things (IoT), Sensing-as-a-Service (SaaS), Web Mashup
关键字：物联网，传感即服务，网络混搭

HSML is a Web-mashup-based development framework for rapid prototyping and testing IoT applications. It consists of: 1) an HTML-like domain specific language as an end-user-development tool; 2) a standard RESTful Web service interface and underlying service composition architecture; 3) a finite-state-machine based service interface description StateML. It allows users, with or without technical expertise, to integrate heterogeneous sensors, actuators and Web services into customizable applications swiftly and flexibly.

HSML是一个基于网络混搭的、用于物联网应用快速原型及测试的开发框架。它包含如下组件：1) 一个基于HTML式领域特定语言的终端用户开发工具；2) 符合RESTful标准的网络服务接口及服务合成架构；3) 基于有限状态机的服务接口描述语言StateML。无论用户是否具备相关技术专业知识，都能使用HSML灵活快速地将各种异构的传感器，促动器及网络服务合成为可定制的应用。

8

**WIDE Camp
2016, Nagano**

**KMD Forum
2016, Tokyo**

**KMD Public
Demo
2017,
Yokohama**

01. Use Case 用例一
 Keywords: Wireless Sensor Network (WSN), Environment Monitor, Real-Time Data Visualization
 关键字：无线传感器网络，环境监测，实时传感数据可视化

The use case was deployed and examined in several public venues. BLE, Mesh and LoRa sensors as well as Web cameras were composed to monitor real-time environment data, including temperature, pressure, noise, CO₂ concentration etc.
 该用例曾实际部署于多个公开会议及活动现场。低功耗蓝牙、网状网络、长距离通信等多种无线传感器及网络摄像头被统合用于监控包括温度、气压、噪声、二氧化碳浓度等实时环境数据。

9

*For full demo, please visit 完整视频请访问
<https://youtu.be/dhWpwqdccHY>

02. Use Case 用例二
 Keywords: Sensor-Actuator Automation
 关键字：传感器-促动器自动化控制

The use case used only three HSML lines and controlled a drone to hop when blowing into a mobilephone mic, by linearly mapping the while noise intensity to the drone's upward speed. 该用例通过仅三行HSML，实现了检测向手机麦克风吹气造成的白噪声强度、操纵无人机向上浮跃的控制逻辑。

```

<loc id="mobileMic" src="http://localhost/mic "></loc>
<loc id="drone " type ="actuator" src="http://131.113.137.162/mobile/uploads/testUser1/drone.xml"></loc>
<lnk id="flappyBirds" function="LINEAR(drone.upspeed, mobileMic.data. pow, 1/70000);"></lnk>
        
```

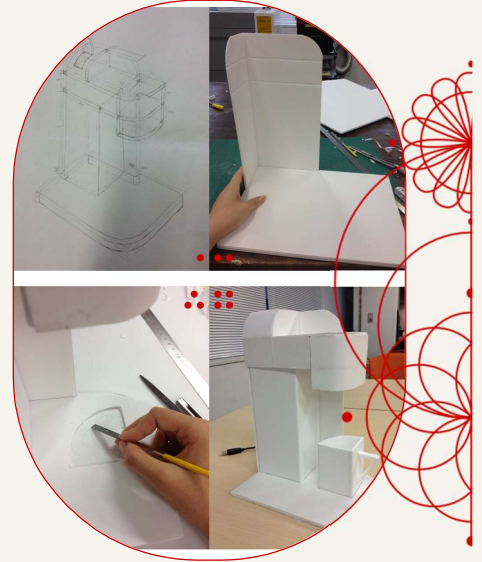
10

Project: Coffee Maker *Yukishiro*

智能咖啡机

01. Model Design 模型设计

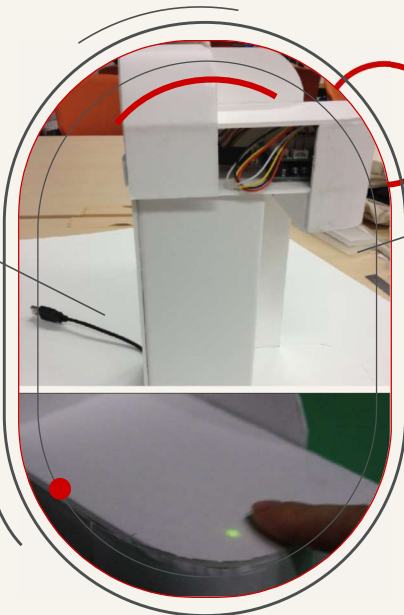
Keywords: Paper Mockup
关键字：纸质等比实物模型



11

02. Interactive Design 交互设计

Keywords: Arduino
关键字：Arduino开发

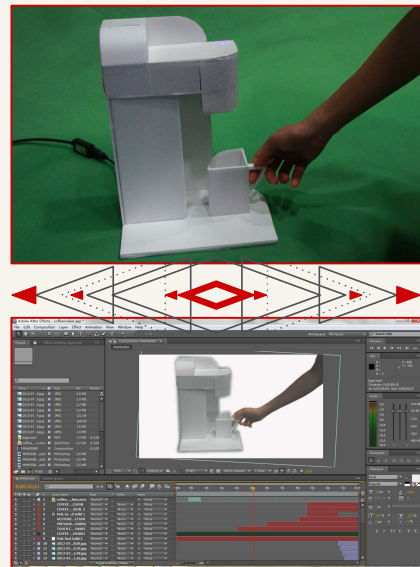


```
sketch_aug17c: Arduino 1.6.8
File Edit Sketch Tools Help
sketch_aug17c
const int ledPin = 13; // the pin that the LED is attached to
void setup() {
  // initialize the serial communication:
  Serial.begin(9600);
  // initialize the ledPin as an output:
  pinMode(ledPin, OUTPUT);
}
void loop() {
  byte brightness;
  // check if data has been sent from the computer:
  if (Serial.available()) {
    // read the most recent byte (which will be from 0 to 255):
    brightness = Serial.read();
    // set the brightness of the LED:
    analogWrite(ledPin, brightness);
  }
}
Done uploading.
```

12

*For full video, please visit 完整视频请访问
<https://youtu.be/cJJrkeH7-lk>

03. 1-Minute Concept Video 一分钟概念视频
 Keywords: Green Screen, Multimedia Editting,
 Adobe After Effects
 关键字：绿幕摄影，多媒体剪辑，
 Adobe After Effects



13

A GRADUATE WORK FOR SECOND BACHELOR DEGREE

2011-2012

Project: *Saligia* 圣利西亚少年特殊学校



*For game trailer, please visit 游戏短片请访问
<https://youtu.be/2XpkDxgjBZ8>



Keywords: Indie Game, 2D Text
 Adventure Game, Psychological
 Suspense
 关键字：独立游戏，二维文字
 冒险，心理悬疑



14

01. Game Script 游戏脚本
Keywords: Access
关键字：Access数据库

02. Game Engine 游戏引擎
Keywords: XNA Game Studio, C#, Control Logic
关键字：XNA Game Studio, C#, 控制逻辑

03. User Interface Programming 游戏界面编程
Keywords: XNA Game Studio, C#
关键字：XNA Game Studio, C#

15

04. User Interface Design 用户界面设计
Keywords: Corel Painter, Adobe Illustrator/Photoshop/Audition/Premiere
关键字：Corel Painter, Adobe Illustrator/Photoshop/Audition/Premiere

16

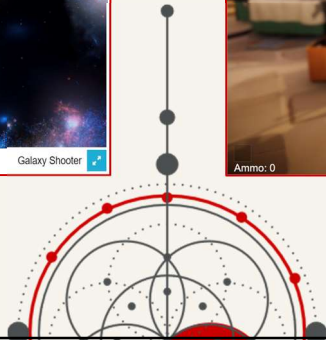
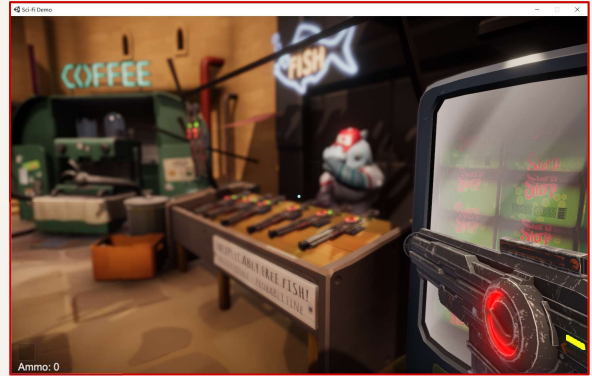
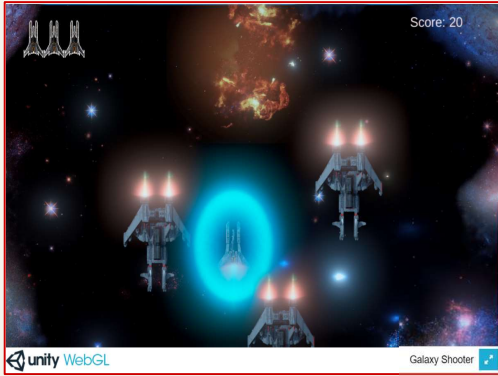
OTHER UNITY INDIE GAME DEMOS

2017

2D&3D Shooting Game Demos 2D及3D射击游戏演示

Keywords: Unity Trial Work

关键字：Unity游戏独立开发试作品



17

WORKING EXPERENCE AT KOEI TECMO GAMES

2018-2019



Keywords: User Feedback Analysis, Localization, Usability Test, Master Test

关键字：用户反馈分析，游戏本地化，可用性测试，Master 版本测试

Participated projects: Dragon Quest Mobile, Uncharted Waters Mobile, Atelier Series (A13-A21), DOAXVV etc.

曾参与作品：勇者斗恶龙手机版，大航海时代手机版，炼金工房系列（A13-A21），生死沙滩排球



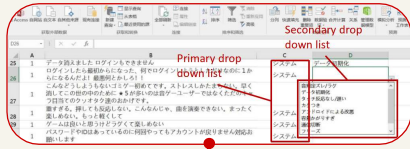
18

WORKING EXPERIENCE AT KOEI TECMO GAMES

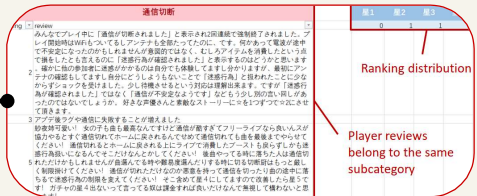
2018-2019

Work Sample: Player Feedback Analysis

手机游戏用户反馈分析



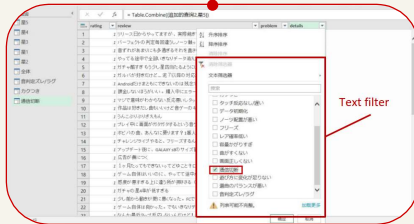
02. Tag System Establishment
建立标签系统
 Keywords: Excel, Data Labelling
 关键字：Excel, 数据标记



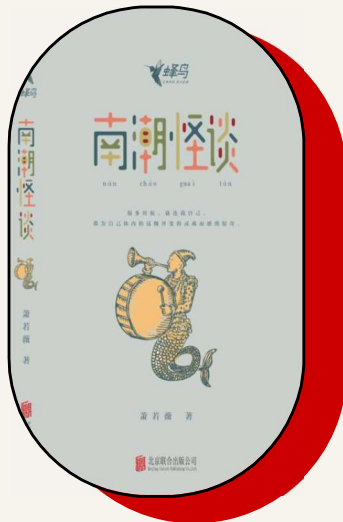
04. Summary View Sample 总结视图示例
 Keywords: Data Merging
 关键字：数据汇总合并



01. User Feedback Collection
用户反馈收集
 Keywords: Web Crawler
 关键字：网络爬虫



03. Data View Generated by Separated Problems
生成不同问题的分类数据视图
 Keywords: Data Query
 关键字：数据查询



THANK YOU
 谢谢

Previous Publication 个人出版物
 Keywords: Fiction,
 Personal Novella Collection
 关键字：小说，个人中篇作品集

For more previous work, please Visit
 更多个人作品请访问：
<http://www2.kmd.keio.ac.jp/~ruowei.xiao>