作业要求

1. **作业篇幅**：中英文书写，5000字/词以上，使用给定模版
2. **提交时间**：11月21日19:59前
3. **提交方式**：PDF格式，命名为“学号+姓名”；暂定Moodle提交，若有变动，QQ群及时通知
4. **课堂报告**：有兴趣的同学可参与课堂报告，根据报告及作业质量期末酌情加分，报告时间后续通知
5. **选题要求**：从三个方向任意方向中选择一个课题，并且要求与大作业方向不一样

文献综述 移动方向选题

南京大学 软件学院 iSE实验室

目录

01

Test Input Generation

课题释义

Test Input Generation

- 测试输入生成即针对给定应用进行测试探索
- 移动应用结构可以抽象为图结构
- 三大主流策略：基于随机、基于模型、基于学习

02

Record & Replay

课题释义

Record & Replay

- 根据人工编写的测试脚本进行录制回放
- 大规模设备集群回放
- 跨平台回放
- 同类型应用测试迁移
- 录制回放的核心：事件的匹配

03

Test Understanding

课题释义

Test Understanding

- 测试产物的理解
- 测试脚本、测试用例、测试报告等
- 有助于帮助开发者快速审查、定位、修复缺陷
- 多模态：自然语言处理、代码语义分析、应用界面理解

04

GUI Understanding

课题释义

GUI Understanding

- 应用GUI界面在软件测试中发挥着越发至关重要的作用
- 页面控件的理解：类型、意图、相对位置关系
- 页面变化的理解：操作带来的GUI变化；应用迭代带来的GUI变化
- 静态GUI界面理解：测试报告中的截图
- 动态GUI界面理解：运行时GUI状态捕获

论文列表

https://docs.qq.com/sheet/DRUtHc3Zkd1Z4b0dq

No.	Paper Title	Category	Venue
1	RANDR: Record and Replay for Android Applications via Targeted Runtime Instrumentation	Record & Replay	ASE19
2	Test Migration Between Mobile Apps with Similar Functionality	Record & Replay	ASE19
3	Test Transfer Across Mobile Apps Through Semantic Mapping	Record & Replay	ASE19
4	Wuji: Automatic Online Combat Game Testing Using Evolutionary Deep Reinforcement Learning	Test Input Generation	ASE19
5	DeepTC-Enhancer: Improving the Readability of Automatically Generated Tests	Te	
6	Owl Eyes: Spotting UI Display Issues via Visual Understanding	Gu	
7	Stay Professional and Efficient: Automatically Generate Titles for Your Bug Reports	Te	
8	UI Obfuscation and Its Effects on Automated UI Analysis for Android Apps	Gu	
9	DeepIntent: Deep Icon-Behavior Learning for Detecting Intention-Behavior Discrepancy in Mobile Apps	Gu	
10	Guided, Stochastic Model-Based GUI Testing of Android Apps	Tes	
11	AppFlow: Using Machine Learning to Synthesize Robust, Reusable UI Tests	Tes	
12	Assessing the Quality of the Steps to Reproduce in Bug Reports	Te	
13	Clustering Test Steps in Natural Language toward Automating Test Automation	Te	
14	Object Detection for Graphical User Interface: Old Fashioned or Deep Learning or a Combination?	Gu	
15	An Empirical S		
16	Benchmarking		
17	Checking Cor		
18	Flaky Test Det		
19	GLIB: Towards		
20	HeteroFuzz: F		
21	Synthesis of V		

22	Vet: Identifying and Avoiding UI Exploration Tarpits	GUI Understanding	FSE21
23	Which Abbreviations Should Be Expanded?	Test Understanding	FSE21
24	Automatic Text Input Generation for Mobile Testing	Test Input Generation	ICSE17
25	From UI Design Image to GUI Skeleton: A Neural Machine Translator to Bootstrap Mobile GUI Implementation	GUI Understanding	ICSE18
26	IconIntent: Automatic Identification of Sensitive UI Widgets based on Icon Classification for Android Apps	GUI Understanding	ICSE19
27	Mimic: UI Compatibility Testing System for Android Apps	Test Input Generation	ICSE19
28	Practical GUI Testing of Android Applications via Model Abstraction and Refinement	Test Input Generation	ICSE19
29	ReCDroid: Automatically Reproducing Android Application Crashes from Bug Reports	Test Input Generation	ICSE19
30	StoryDroid: Automated Generation of Storyboard for Android Apps	Test Input Generation	ICSE19
31	Collaborative Bug Finding for Android Apps	Test Input Generation	ICSE20
	d Apps via Use Case Combinations	Test Input Generation	ICSE20
	g Activity Launching Contexts	Test Input Generation	ICSE20
	Testing System for Touch Screen Applications	GUI Understanding	ICSE20
	gainst Design-Don't Guidelines	GUI Understanding	ICSE20
	layable Scenarios	GUI Understanding	ICSE20
	Mobile GUI Components by Deep Learning	GUI Understanding	ICSE20
	nsistency Checking and Suggestion	Test Understanding	ICSE21
	t Learning	Test Input Generation	ICSE21
	ws	Test Understanding	ICSE21
	Comments based on Market Policies	Test Understanding	ICSE21
	lames in Source Code	Test Understanding	ICSE21
	cations	GUI Understanding	ICSE21

44	It Takes Two to TANGO: Combining Visual and Textual Information for Detecting Duplicate Video-Based Bug Reports	GUI Understanding	ICSE21
45	Semantic Web Accessibility Testing via Hierarchical Visual Analysis	GUI Understanding	ICSE21
46	Barista: A Technique for Recording, Encoding, and Running Platform Independent Android Tests	Record & Replay	ICST17
47	Sapienz: Multi-objective Automated Testing for Android Applications	Test Input Generation	ISSTA16
48	Automatically Translating Bug Reports into Test Cases for Mobile Apps	Test Input Generation	ISSTA18
49	Improving Random GUI Testing with Image-Based Widget Detection	GUI Understanding	ISSTA19
50	Learning User Interface Element Interactions	GUI Understanding	ISSTA19
51	SARA: Self-Replay Augmented Record and Replay for Android in Industrial Cases	Record & Replay	ISSTA19
52	TestMig: Migrating GUI Test Cases from iOS to Android	Record & Replay	ISSTA19
53	Automated Classification of Actions in Bug Reports of Mobile Apps	Test Understanding	ISSTA20
54	Reinforcement Learning Based Curiosity-Driven Testing of Android Applications	Test Input Generation	ISSTA20
55	An Infrastructure Approach to Improving Effectiveness of Android UI Testing Tools	Test Input Generation	ISSTA21
56	GUIDER: GUI Structure and Vision Co-guided Test Script Repair for Android Apps	Test Input Generation	ISSTA21
57	Semantic Matching of GUI Events for Test Reuse: Are We There Yet?	Record & Replay	ISSTA21
58	Understanding and Finding System Setting-Related Defects in Android Apps	Test Input Generation	ISSTA21
59	WebEvo: Taming Web Application Evolution via Detecting Semantic Structure Changes	Test Input Generation	ISSTA21
60	psc2code: Denoising Code Extraction from Programming Screencasts	GUI Understanding	TOSEM20
61	Wireframe-based UI Design Search through Image Autoencoder	GUI Understanding	TOSEM20
62	How Should I Improve the UI of My App?: A Study of User Reviews of Popular Apps in the Google Play	Test Understanding	TOSEM21
63	GUI-Guided Test Script Repair for Mobile Apps	Test Input Generation	TSE20
64	Machine Learning-Based Prototyping of Graphical User Interfaces for Mobile Apps	GUI Understanding	TSE20
65	Why My App Crashes? Understanding and Benchmarking Framework-specific Exceptions of Android apps	Test Input Generation	TSE20

论文列表

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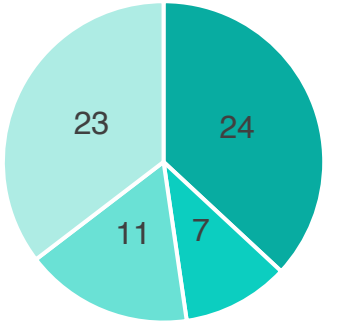

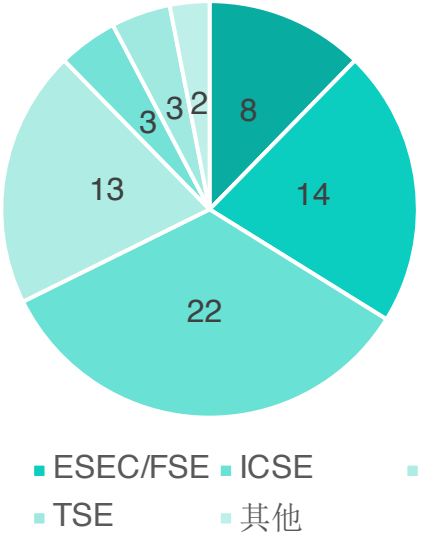

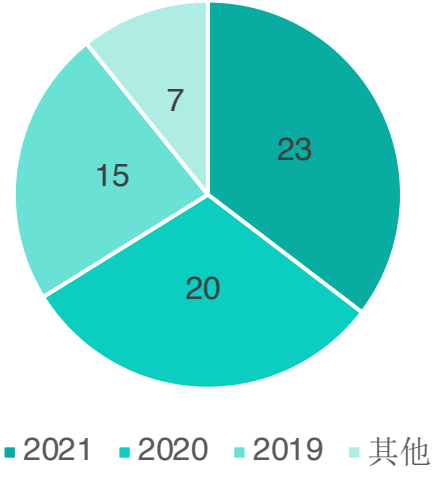

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加入我们研究小组一起搞科研！