Augmented Reality Based Continuous Onboarding Framework

İpek OHRİ - 201311038
Bora ORKUN - 201311039
H. İrem ÖGE - 201311040

Advisor: Asst. Prof. Dr.Murat YILMAZ
Co-Advisor: Dr. Eray TÜZÜN

Content

- ➔ Augmented Reality Based Continuous Onboarding Framework (ARBCOF)
- ➔ Main Contribution
- ➔ Technology Used
- ➔ Work Plan & Success
- ➔ Potential Risks
- ➔ Results

Augmented Reality Based Continuous Onboarding Framework

Problem: It is hard to adapt to a new company & keep pace with continuous integration for software developers.

Solution: Creating a continuous onboarding & virtual dashboard for software engineers in a software company.

- **Orientation Mode** for **newcomers**
- **Operation Mode** for **project tracking**

Main Contribution

- Using AR in the service for Software Engineering
- Displaying virtual data through physical objects
- Combination of traditional board culture & modern repository tools.
- Onboarding with mobile phones.
- Easy access.

Technology Used

- Augmented Reality
- Unity
- Vuforia
- Visual Studio
- MS SQL Server
- Team Foundation Server
- GearHost

Work Plan & Success

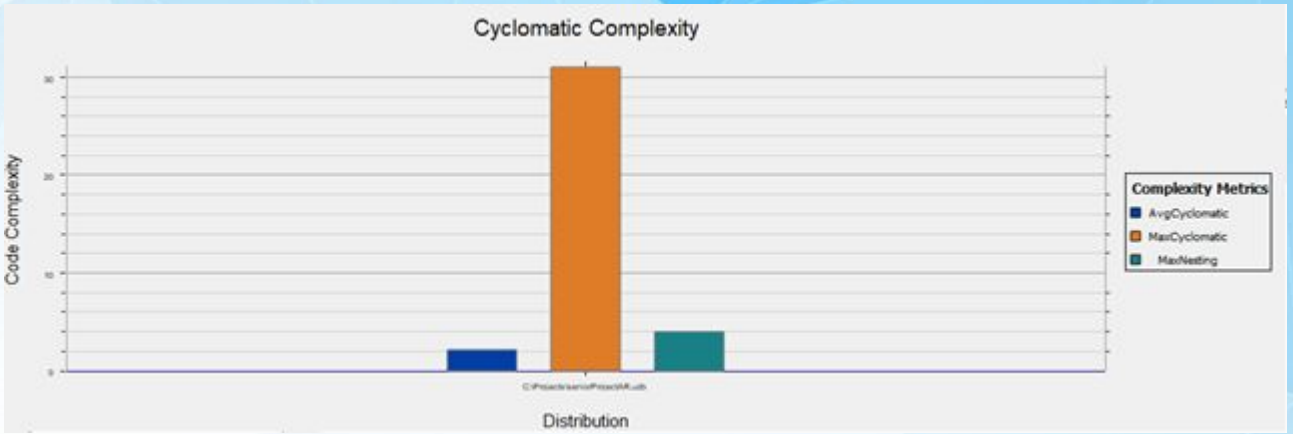
Criteria / Sprints	Sprint 1: Orientation Mode (OM)	Sprint 2: Operation Mode (OPM)	Sprint 3: Menu & Navigation
	Requirement Analysis	Requirement Analysis	Menu & Login GUI Design
	OM GUI Components	OPM GUI Design	Login operations
	Retrieving data from sources	OPM GUI Components	Menu navigation implementation
	Implementation	Data connections & implementation	System integration
	Testing	Testing	System testing
	Deployment	Deployment	Deployment
	Agile Retrospective Meeting	Agile Retrospective Meeting	Agile Retrospective Meeting
Overall Results:	**Successful tests and product with Orientation Mode.**	**Successful tests product with Orientation and Operation Modes.**	**Integrated, functional product with expected features.**

Potential Risks

Risks	Precautions	Potential Impact	Plan B	Implication Level
Database hosting service can crash	Back-ups	Unavailable system	Using one of the back-ups	High
Changing requirements from company	Structural and planned programming that is adaptable to changes	Delays in the development process	Using the earlier documentation & versions	High
Lack of light for image scan	Choosing clear image targets for easy scanning	Image targets cannot be scanned correctly	Using the flashlight of mobile phones	Medium
Incompatibility of mobile devices	Developed for all current android device	Some users may have problem running the system	New apk files & updates	Medium

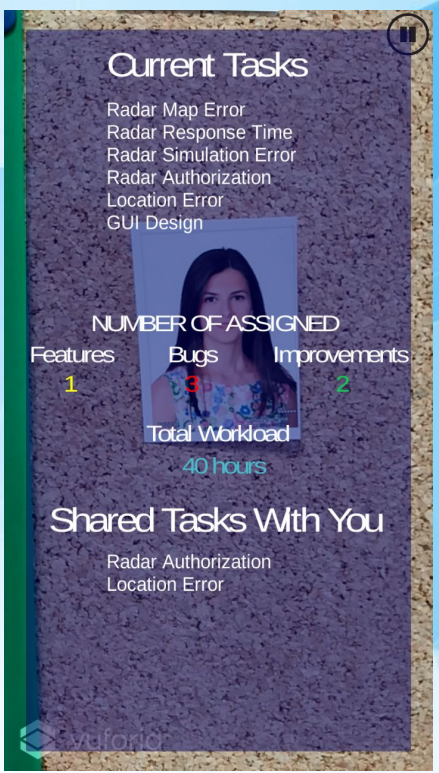
Code Metrics

- 3 modules
- 2.3 defects/KLOC defect density.
- 2.2 average cyclomatic complexity.



Outputs


Irem OGE
Software Engineer
Combat Systems
Personal Information
Irem Oge, she joined us in July 2016. She got her MS degree in 2015. She likes travelling, ballet and theatre.
Contact
iremoge@outlook.com
Speciality
Java
Dev. Team
Mercury
Todays Events
vuforia


Current Tasks
Radar Map Error
Radar Response Time
Radar Simulation Error
Radar Authorization
Location Error
GUI Design
NUMBER OF ASSIGNED
Features
1
Bugs
3
Improvements
2
Total Workload
40 hours
Shared Tasks With You
Radar Authorization
Location Error
vuforia


FEAT#008
In Progress
Open in TFS
Radar Coloring
IN PROGRESS
Definition
Ship and ocean coloring
FEAT#008
Radar Coloring
Planned Start Date
2018-04-24
Start Date
2018-04-24
End Date
Assignee(s)
Ipek OHRI

Results

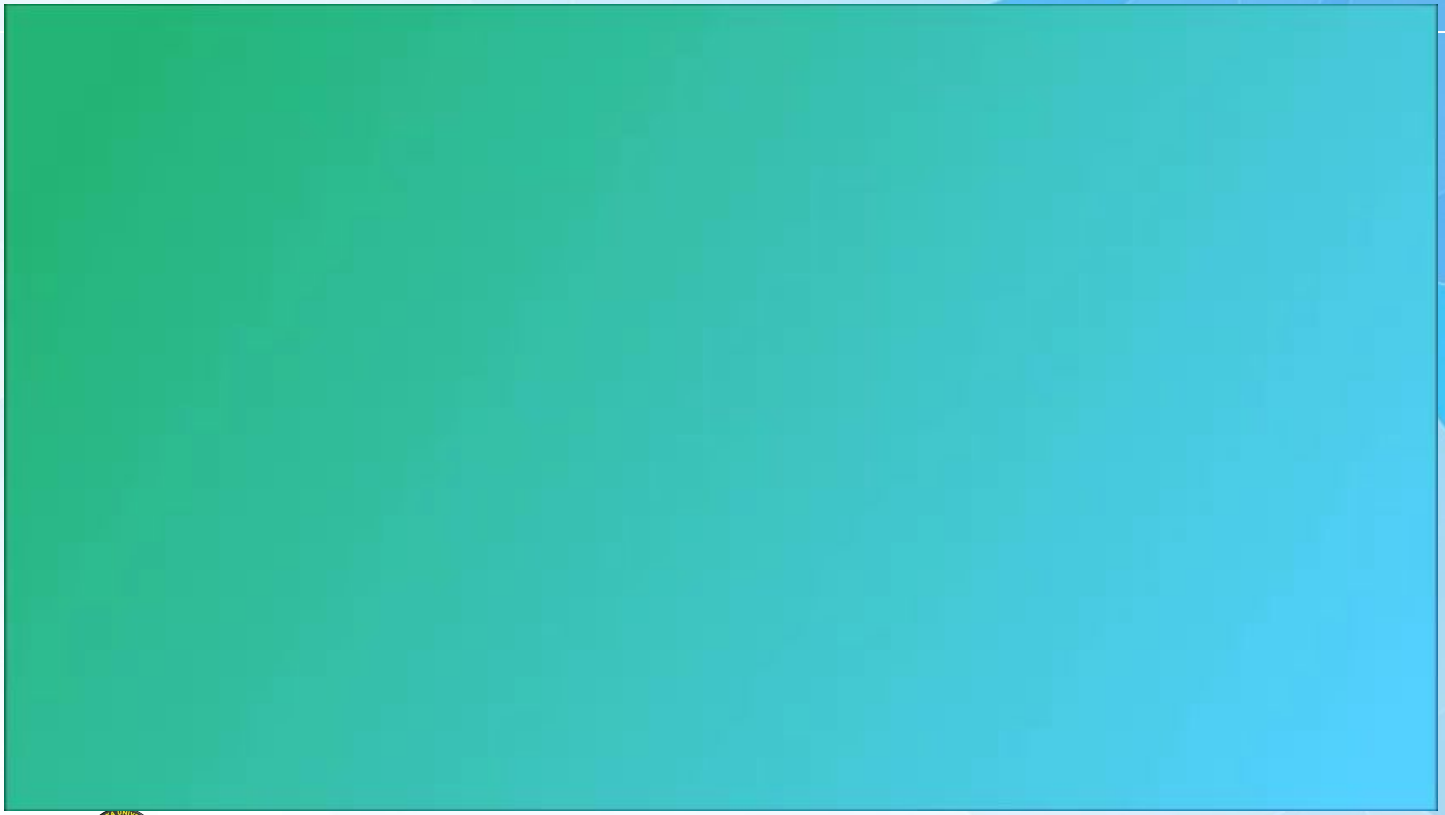
- 2209/B Industry Oriented Graduate Thesis Support (**Accepted**)
- EuroAsiaSPI 2018 Article (**Accepted**)
- UYMS 2018 Article (**Submitted**)
- 80% Appreciation

TÜBİTAK

UYMS 2018

EuroAsiaSPI² 2018 European System, Software & Service Process Improvement & Innovation

Project Demo



thank you!