KOÇ
UNIVERSITY

Comp 491 Project Progress – Progress Meeting 2

"Ülgen": Residence Activity Monitor and OR Solutions to Disasters

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Halil Doruk Yildirim, Bumin Aybars Inci

Project Description

Background Research (All), UX/UI Design (Doruk),
Cloud (Kaan), Backend (Kaan), Mobile (Aybars), Google-OR (Can).

#	Task Name	Duration	Start	End	Priority	Completion	Work	Cost
1	Background Resarch	1 wk	20.03.2023	26.03.2023	500	0%	0 hrs	₺0.00
2	UX/UI Design	8 wks	27.03.2023	21.05.2023	500	0%	0 hrs	₺0.00
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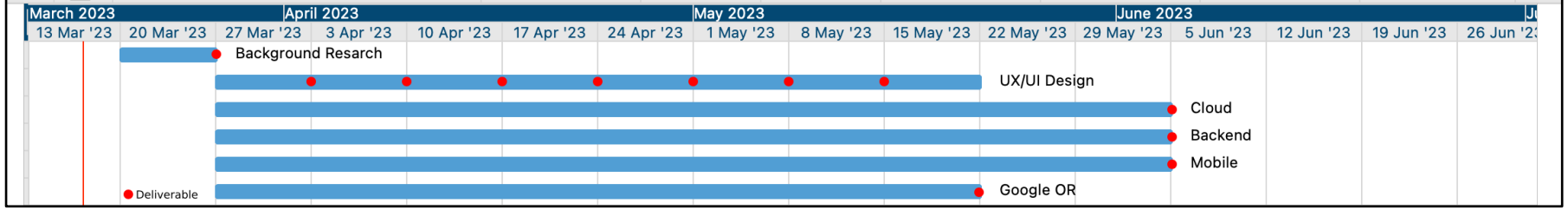

Previous Project Meeting

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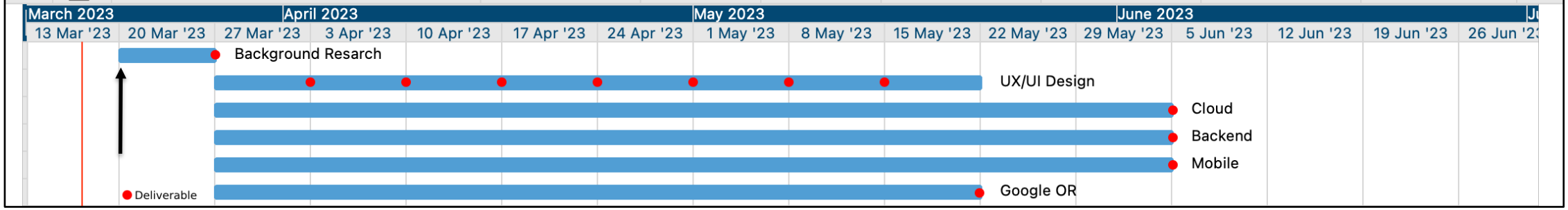

Previous Project Meeting (1)

- Background Research
  - The data we store, and transfer is sensitive, thus, we thought a lot about these processes. We did brainstorm of the concepts such as applying cryptography, creating easy to use UI design, securing data in the client-side as well as server-side.
- Cloud
  - N/A
- Backend
  - Spring Boot 3 and Spring Security 6 were a major version updates, and they changed some terminologies that I used to know in Spring Boot. It was like a learning experience. Learned and implemented our initial backend with new knowledge.
- Mobile
  - Started Analyzing Android System Capabilities. Began researching for the main networking problem.

Previous Project Meeting (2)

- UI Design
  - Planned to create the design goal for the application and make a proper report.
  - Planned to begin wireframing the interface with the formed design goal.
    - Found it difficult to begin wireframing without thoroughly designing a goal. Created a design goal but it will probably be transformed during the project as we gain more information and go through more research methods; as is agile development.
- Google-OR
  - Problem of finding a suitable solution for our project in Google OR's example problems.
    - Examined possible solutions and found a feasible approach using modified version of TSP for priority implementation.

Current Progress Meeting

- Background Research Phase is completed.
- Architecture Diagram is introduced, Cost Estimation is made, and Initial Backend got Deployed on AWS EC2 (Kaan)
- Finalized the idea of Google OR exploration and its usage. (Can)
- UI/UX Design Goal is completed, and report created, planning of Exploratory Research (Doruk)
- Started analyzing Open-Source Repo: Ning. (Aybars)

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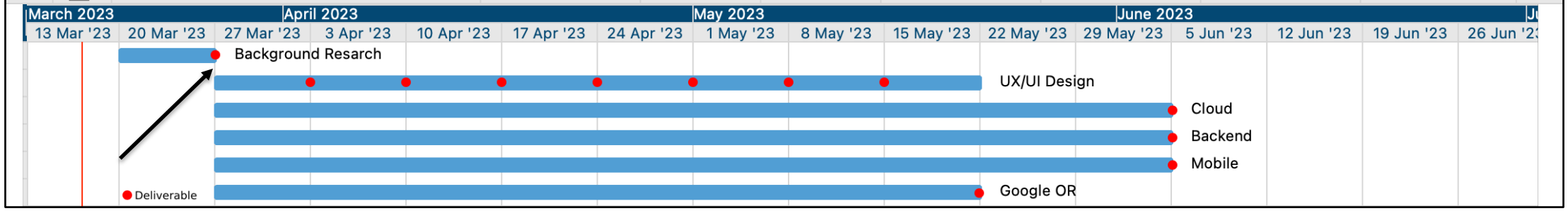

Next Project Meeting

- Background Research Phase will be completed.
- Backend's User Part will be completed. (Kaan)
- Initial steps of the algorithm used in priority for TSP implementation will be implemented. (Can)
- Setting up and creating Exploratory User Research, start creating initial UI/Wireframing. (Doruk)
- Main networking problem will be solved. (Aybars)

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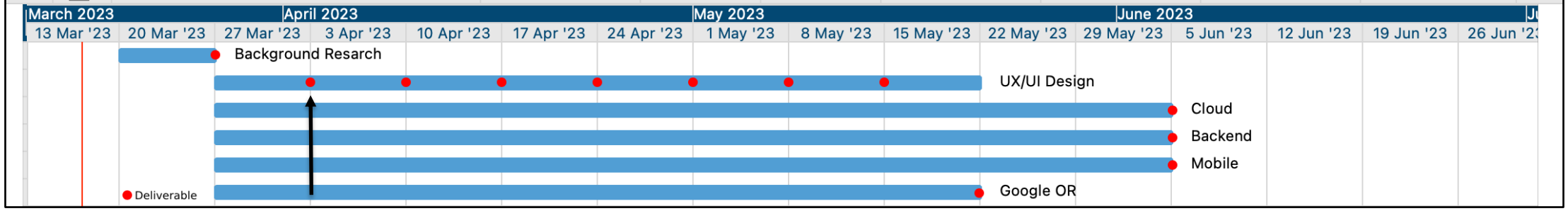
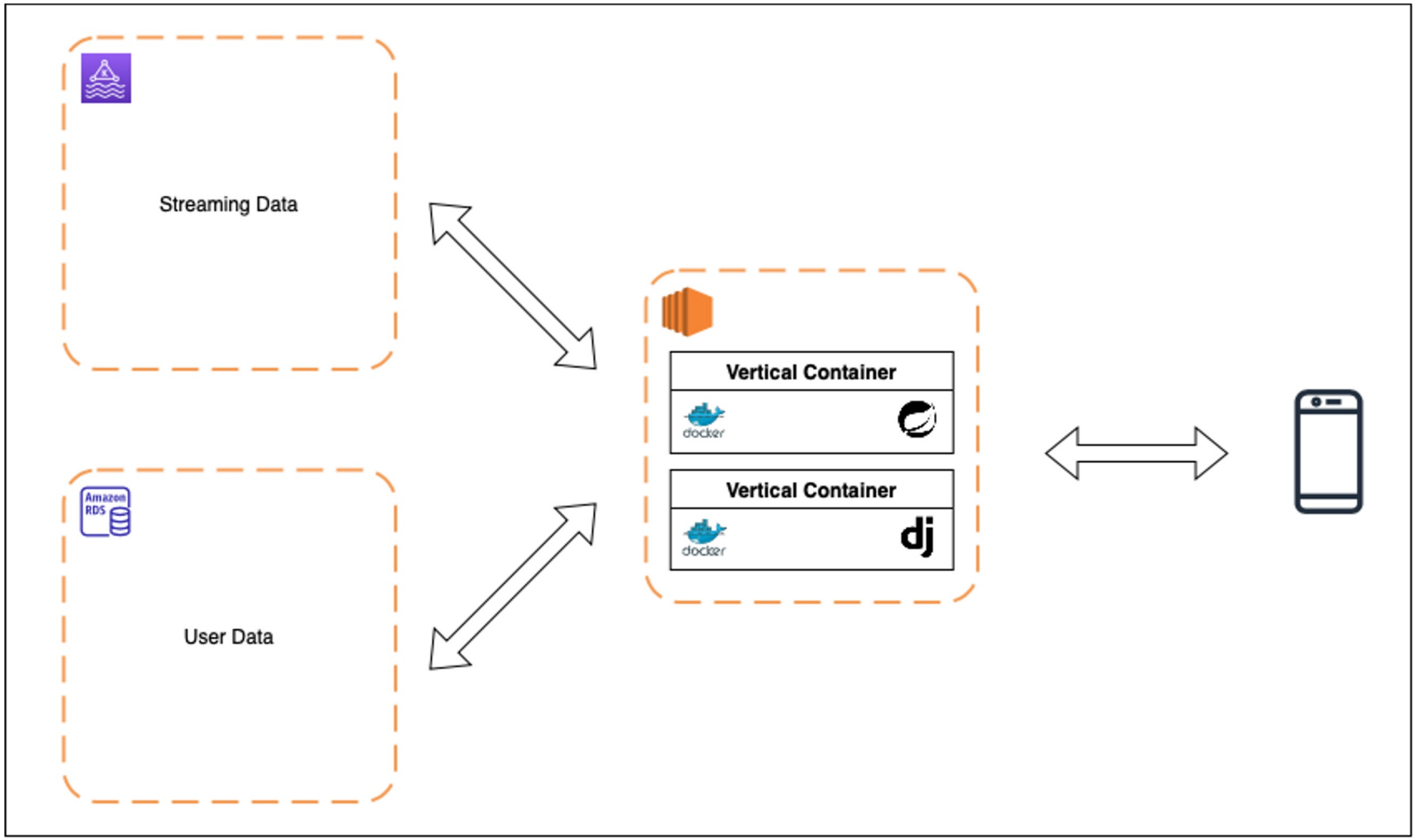


Deliverable - Concrete Plan

- Cloud
  - It is considered to it is a good practice to deploy Kafka on EC2 in initial stages and will be looked into at later in the end of the project.
  - Cloud is set up, EC2 is now running our Dockerized Backend while RDS running on PostgreSQL DB.
- Backend
  - Microservice architecture seems unnecessary.
  - Initial Backend is completed: Commit 3118147 at github.com/UlgenApp under Ulgen-Backend Repo.
- Mobile
  - Android Network Service Discovery is not suitable for expected network capabilities: it only discovers “ready-to-connect” devices.
- UI Design
  - Design goal is determined, and report is made but can be reevaluated depending on exploratory research.
  - Creating the wireframe of the interface with respect to the set design goals using Figma.
- Google-OR
  - Focused on finding solutions for priority problem in Traveling Salesman Problem. Found 4 possible solutions which will be discussed with the team.
  - Initializing the first steps of algorithm of the chosen solution.

Deliverable - Kaan (1)



Deliverable - Kaan (2)

- Base URL: http://ec2-44-193-17-15.compute-1.amazonaws.com:8080/
- PostgreSQL URL: jdbc:postgresql://ulgen-db.cxht04qhom8t.us-east-1.rds.amazonaws.com:5432
- Currently Active Endpoints: /api/v1/auth/register, /api/v1/auth/authenticate