



My Font

Proposal

황용환
김선규
오근택
이상욱



My Font



프로젝트 개요



수행 계획



역할 분담



개발 일정



1

프로젝트 개요

프로젝트 개요

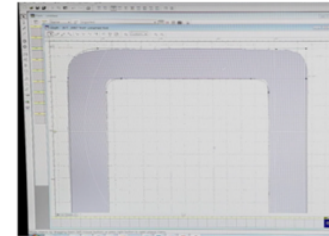
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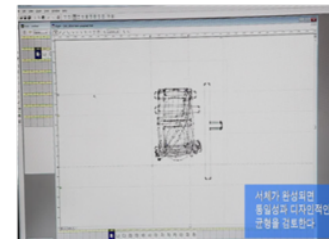
①



②



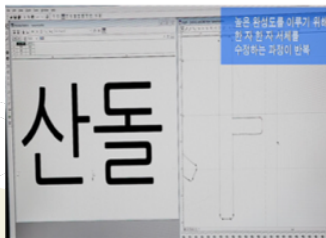
③



④



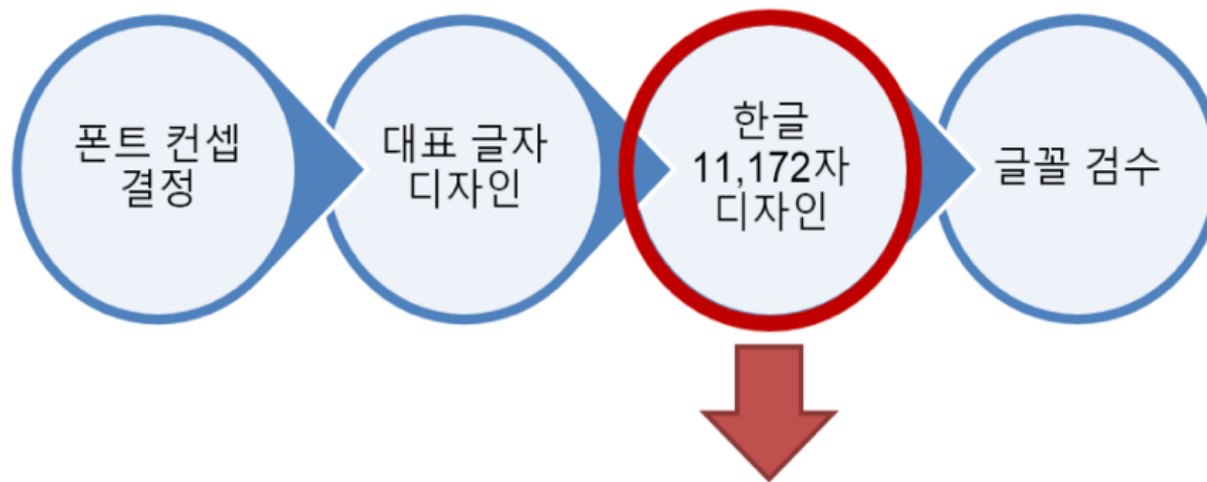
⑤



⑥

프로젝트 개요

한글 폰트 제작 과정



막대한 시간 필요

(글자 하나 디자인 하는데 10분만 걸린다고 해도 1,862 시간 필요)
개인 디자이너는 한글 폰트 제작이 거의 불가능!

프로젝트 개요

한글

Alphabet

글자수



11,172자



약 100여자

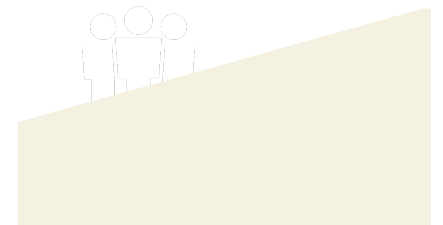
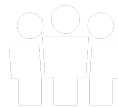
제작기간



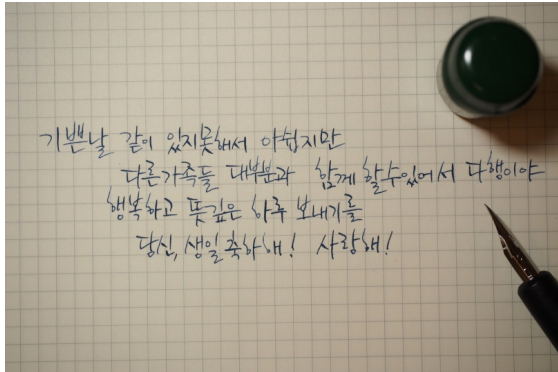
약 100일



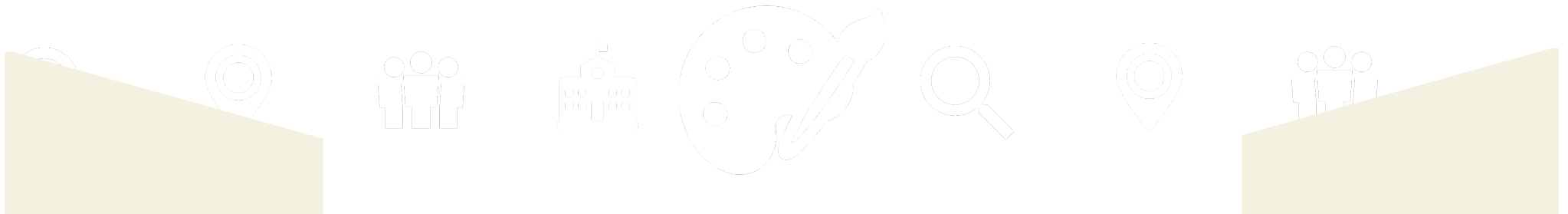
약 30일



프로젝트 개요



Machine Learning

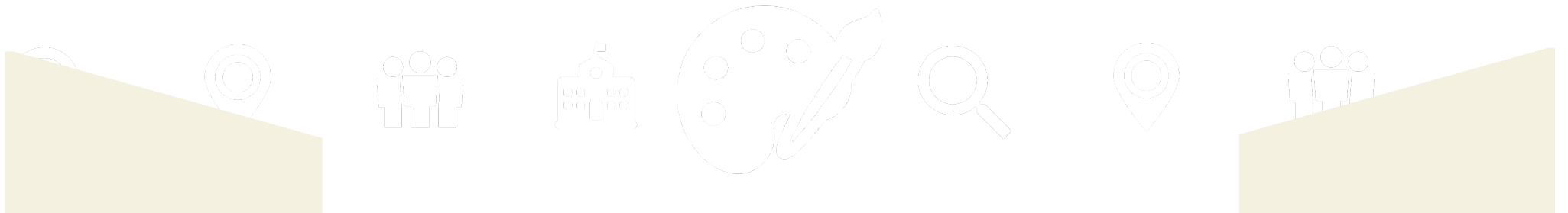
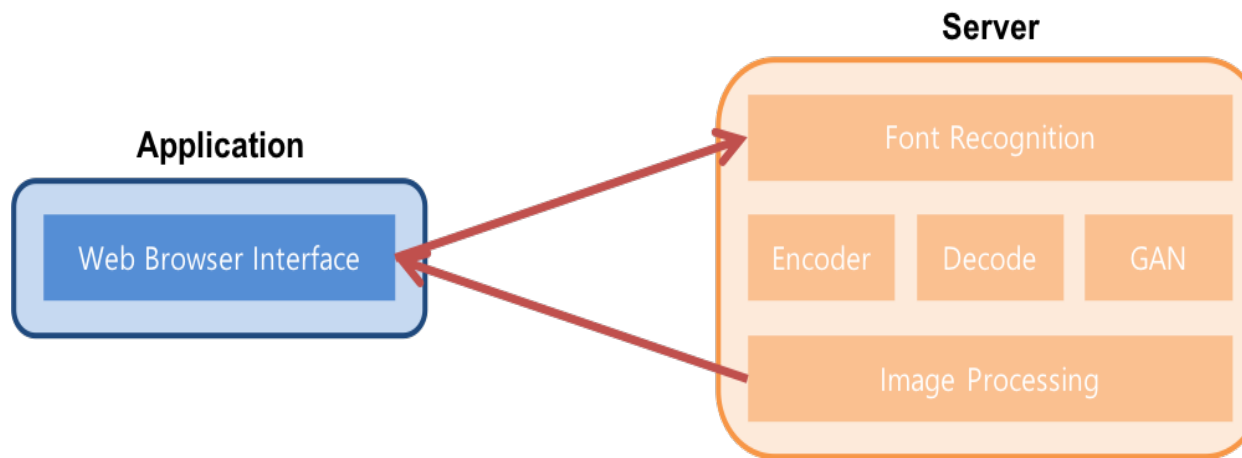




2

수행 계획

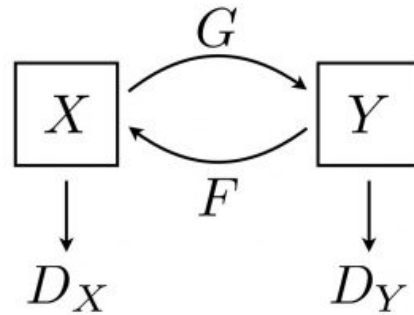
수행 계획



사용 기술

OCR

Optical Character Recognition



Cycle
Generative Adversarial Networks



Image to TTF

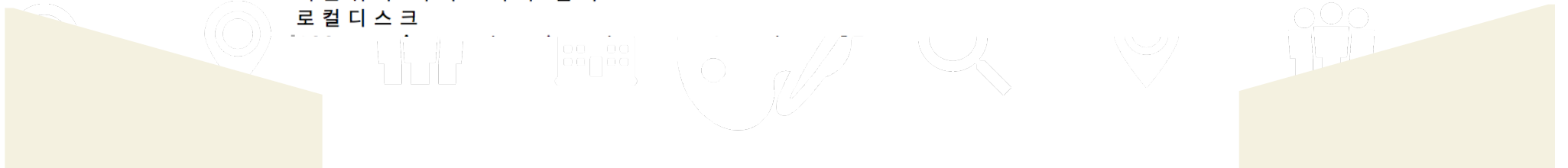
수행 계획

OCR

테스트 다운로드 바탕화면
최근위치 라이브러리 음악
로컬디스크



```
[192:ocr iamyonghwan$ python test1.py font.png  
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테스트 다운로드 바탕 화면  
최근 위치 라이브러리 음악  
로컬 디스크
```



CycleGAN

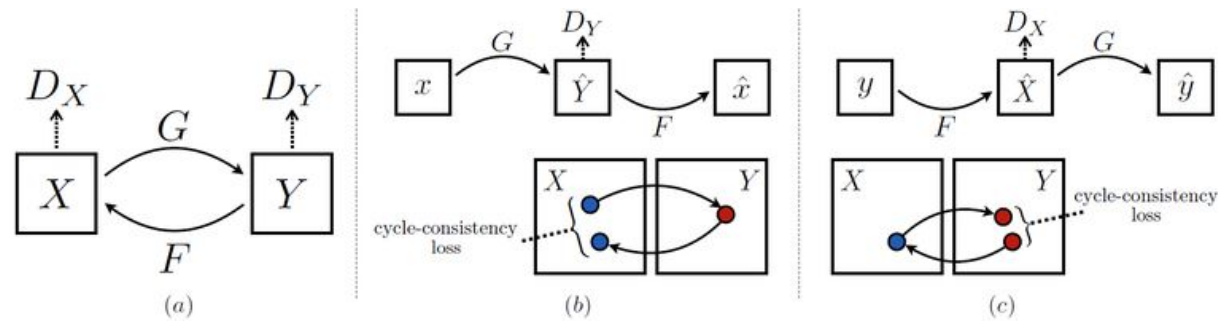
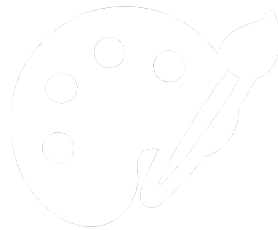


Figure 3: (a) Our model contains two mapping functions $G: X \rightarrow Y$ and $F: Y \rightarrow X$, and associated adversarial discriminators D_Y and D_X . D_Y encourages G to translate X into outputs indistinguishable from domain Y , and vice versa for D_X , F , and X . To further regularize the mappings, we introduce two “cycle consistency losses” that capture the intuition that if we translate from one domain to the other and back again we should arrive where we started: (b) forward cycle-consistency loss: $x \rightarrow G(x) \rightarrow F(G(x)) \approx x$, and (c) backward cycle-consistency loss: $y \rightarrow F(y) \rightarrow G(F(y)) \approx y$

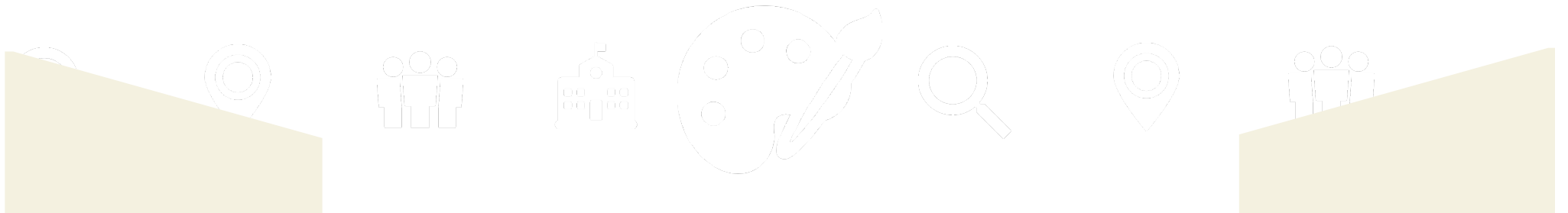
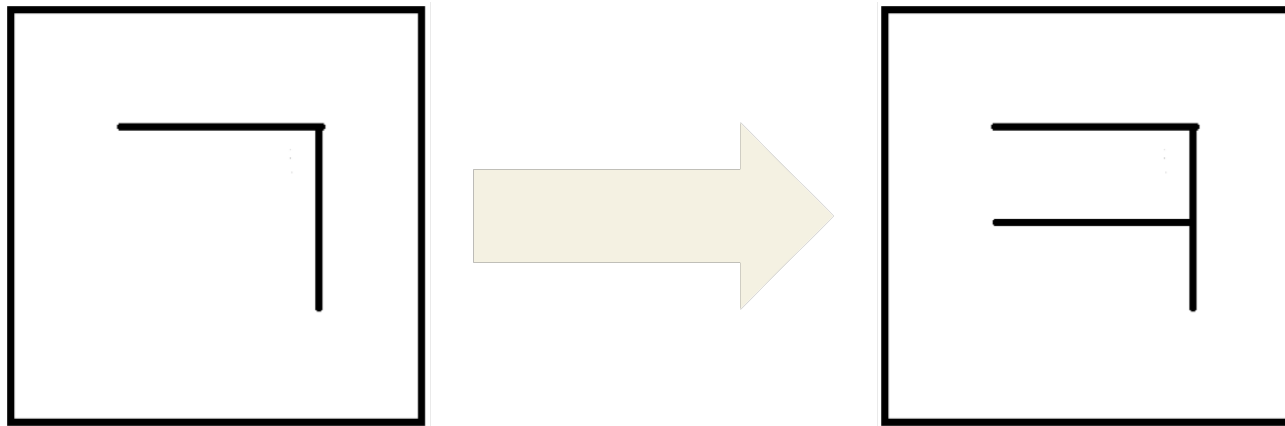
수행 계획

CycleGAN



수행 계획

CycleGAN



수행 계획

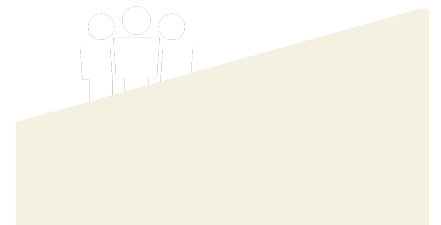
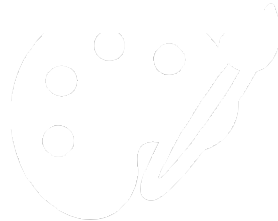
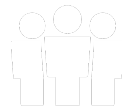
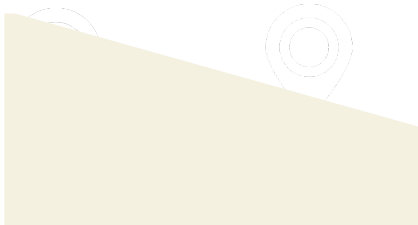
Image to TTF

ㄱ → 가 → 갑 → 값

ㄱ → 가 → 갑 → 값

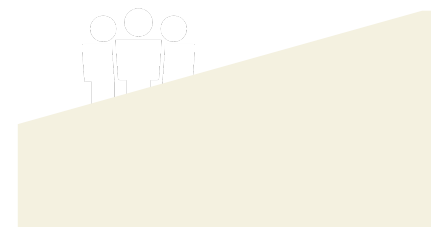
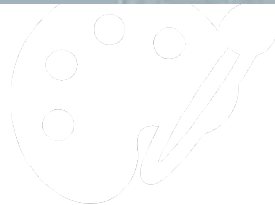
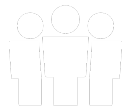
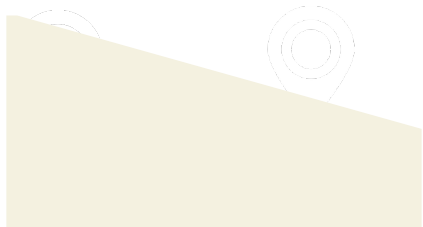
수행 계획

Web Interface 디자인 및 구현



수행 계획

실험



3

역할 분담



3

역할 분담



황용환 : 전반적인 프로세스 관리

김선규 : 웹 인터페이스 개발

오근택 : 영상처리

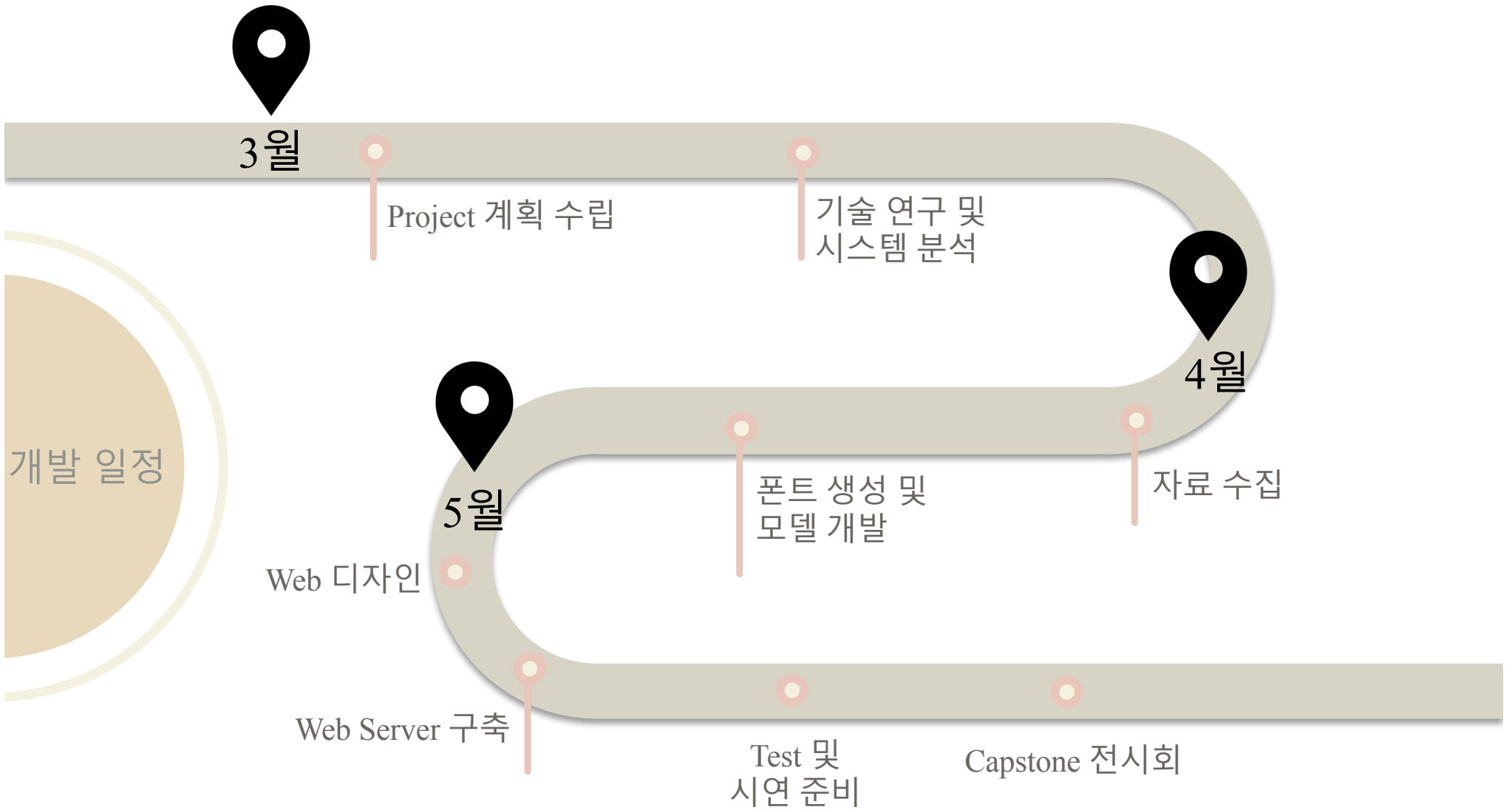
이상욱 : 데이터 수집 및 처리

공통 : 폰트 생성 모델 구현



4

개발 일정





Thanks!