

# SEUNGWON JEONG

I am a student interested in **computer graphics** and **deep learning**.

I enjoy music and exercise, and I love learning anything new.



## Personal info

- \* 01/05/1998
- +82-010-2482-3878
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## Links

- https://svwj.github.io
- /svvj
- /seung-won-jeong-ba149424a
- /SWJeong
- /seungwonjeong

## Skills

- C++, C, Python, OpenGL, PyTorch, OpenCV, C#, CUDA, Javascript, Typescript, NodeJS, MongoDB
- LaTeX, HTML, CSS
- {MS} Office
- Linux, Windows, Docker
- VS, VS Code, PyCharm, CLion
- Blender, {Adobe} Photoshop, Premiere Pro

## EDUCATION

### Korea University (Master's Degree)

SEOUL, SOUTH KOREA    MAR 2022 – CONTINUE

Grade: 4.09

Major: Computer Science and Engineering

Research Topic: Physics-Based Simulation & Deep Learning

Thesis: A Hybrid Iterative Algorithm for Solving Constraint Optimization Problems

### Korea University (Bachelor)

SEOUL, SOUTH KOREA    MAR 2016 – FEB 2022

Grade: 3.65

Major: Computer Science and Engineering

Subsidiary subject: Artificial Intelligence

### Daejeon Science High School

DAEJEON, SOUTH KOREA    MAR 2013 – FEB 2016

Major: Computer Science & Astronomy

## WORK EXPERIENCE

### Teaching Assistant

Part-time, **Computer Graphics** Course, [Link]

MAR 2021 – JUL 2021

- Programming Assignment Creation
  - Implementation of Character Animation and Ray Tracing Assignment Based on OpenGL

### Backend Developer

Part-time, Joanolab, [Link]

NOV 2019 – JUN 2020

- Team Manager & Backend Developer
  - Login authentication system
  - User database management
  - Backend programming and deployment

### Republic of Korea Army Soldier

Full-time, Compulsory Service

MAR 2018 – NOV 2019

- Tactic Server Administrator
  - Ensure continuous connectivity of tactic servers.
  - Conduct server maintenance and user management.
- Server Management and Communication Tasks
  - Manage intranet and CCTV networks within the DMZ (Demilitarized Zone) outpost.
  - Administer intranet security.

## PROJECTS

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### Digital Human Project

KOREA UNIVERSITY 2023

Using physics-based simulations, we developed a real-time deep-learning model to create virtual human characters from RGB camera footage, complete with realistic virtual clothing.

My role involved developing parallel algorithms for efficient cloth simulation processing, creating a renderer, and modeling the virtual clothing. I also integrated the outputs of the deep learning model with cloth simulations to enhance the interaction and realism of the virtual characters.

Python, PyTorch, Taichi Lang, OpenGL, OpenCV, Blender,  $\LaTeX$

### Differentiable Flag

KOREA UNIVERSITY 2021-2022

Utilized a differentiable physics simulator to train a deep learning model, enabling it to learn and output simulation parameters for creating desired flag movements from RGB camera-captured data and 3D reconstructions.

My role in this project was to implement the deep learning model and the differentiable physics solver. Additionally, I was responsible for generating 3D flags from 2D video footage of fluttering flags, which served as the basis for the model's training data.

Python, PyTorch, OpenCV, PyTorch3D,  $\LaTeX$

### Outsourcing Website Production

JOANHOLAB 2019-2020 [Link]

As Team Manager, I managed communications with the principal contractors and coordinated task distribution among team members.

As a Backend Developer, I implemented a secure login system, oversaw user database management, and led backend programming and deployment.

Typescript, NodeJS, MongoDB, Linux, Docker

## AWARDS

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### Professional Manpower Training for VR·AR Research Contest

**Best Research Award**, Korea Electronics Association

2023

# SEUNGWON JEONG

## Languages

 Korean (Mother tongue)

 English (TOEFL 88)

## Hobbies

 Playing various instruments

 Photography

 Exercise such as gym, soccer, etc.