# Jayeon Joo

MAN PROPOSES, GOD DISPOSES

## Contacts


010-8985-4815

zoonature@snu.ac.kr


## Languages

English (newTEPS 358)

## Skills

1. Programming Languages :- MATLAB/ C/C++/Python

2. AI Frameworks : Tensorflow/PyTorch/Pytorch Lightning

3. Engineering Tools : openVSP, PointWise,Tecplot

## Education

### Master of Science, Seoul National University, Seoul

SEPTEMBER 2021 — PRESENT

- Major in Aerospace Engineering
- GPA 3.58/4.3

### Bachelor of Science, Sejong University, Seoul

MARCH 2017 — SEPTEMBER 2021

- Double major in Science in Software & Aerospace Engineering
- GPA 3.88/4.5

## Research / Employment Experiences

### Student Researcher, Aerodynamics Simulation & Design Laboratory, Seoul National University, Seoul

JANUARY 2021 — PRESENT

- Studied Artificial Intelligence & Computational Fluid Dynamics
- Research topic: data-driven numerical method
- *Advisor: Prof. Chong-am Kim*

### Student Researcher, Computer Graphics Laboratory, Sejong University, Seoul

AUGUST 2017 — DECEMBER 2020

- Studied Physics-based Animation
- Research topic: fluid simulation (SPH, CIP, etc.)
- *Advisor: Prof. Oh-young Song*

### Intern, NineVR, Seoul

DECEMBER 2018 — MARCH 2019

- Developed VR game by using Unity

## Book Publications

### 1. Physics Coding by Python

- Participated in programming part
- Writer: Oh-young Song

## International Conference Publications

### 1. Data-driven Limiting Strategy for Finite Volume Methods on Multi-dimensional Unstructured Meshes.

- D. Kim, **J. Joo,** H. You, K, Oh, C. Kim, H. Cho, T. Kim, M. Kang, and M. Choi,
- 13th Asian Computational Fluid Dynamics Conference, 16-19 Oct. 2022, Jeju, Korea.

## Domestic Conference Publications

### 1. A Robust and Accurate Reconstruction Method for Finite Volume Method using Tree Model

- **J. Joo,** D. Kim, H. You, C. Kim,
- Korean Society for Aeronautical & Space Sciences 2023 Spring Conference, 19-21 April. 2023 Jeju, Korea.

### 2. Data-driven Troubled-cell Indicator for High-order Methods

- D. Kim, **J. Joo,** C. Kim,
- Korean Society for Aeronautical & Space Sciences 2023 Spring Conference, 19-21 April. 2023 Jeju, Korea.

**3. Three-dimensional Flight Vehicle Simulation  Using FCNN-based Multi-dimensional Limiting Process.**

- **J. Joo,** D. Kim, K. Oh, H. You, C. Kim,
- Korean Society for Aeronautical & Space Sciences 2022 Fall Conference, 16-18 Nov. 2022 Jeju, Korea.

**4. Multi-dimensional Limiting Process Based on Fully-connected Neural Network: Extension to Unstructured Meshes.**

- **J. Joo**, D. Kim, K. Oh, H. You, C. Kim, H. Cho, T. Kim, M. Kang, and M. Choi,
- Korean Institute of Military Science & Technology, 2022 Spring Conference, 10-12 June. 2022 Jeju, Korea.

**5. Multi-dimensional Limiting Process Based on Fully-connected Neural Network.**

- D. Kim, **J. Joo**, M. Kim, H. You, K. Oh, C. Kim, H. Cho, H. Cho, M. Kang, and M. Choi,
- Korean Society for Aeronautical & Space Sciences 2021 Fall Conference, 17-19 Nov. 2021, Jeju, Korea.

## Teaching Experiences

### 1. Introduction to Python Programming

MARCH 2018 — DECEMBER 2020

- Helped non-major students as an assistant (2018.3 ~ 2019.12)
- Taught non-major students as an instructor (2020.3 ~ 2020.12)
- Covered Python from grammar to application

### 2. Physics and Simulation

MARCH 2020 — JUNE 2020

- Taught major students as an instructor on online live classes due to COVID 19
- Code drive: https://www.glowscript.org/#/user/zoonature/folder/physcissimulation/

## Extra-curricular activities

### Staff Member, LikeLION

SEPTEMBER 2018 — JUNE 2020

- Learned web programming
- Did web project by using html, css, Django, PostgreSQL
- Did programming education volunteer for high school students

## Awards & Honors

### 1. Samsung Scolarship

MARCH 2018 — JUNE 2019

### 2. Excellence Award in Artificial Intelligent IDEA Contest, Sejong University

OCTOBER 2019

- Title: MODU (Magic On eDucation )
- Developed a web page with support

### 3. Best Paper Award, Korean Society for Aeronautical & Space Sciences,

APRIL 2023

- Paper title: Three-dimensional Flight Vehicle Simulation  Using FCNN-based Multi-dimensional Limiting Process.