

# Hyeon Yu

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github.com/hyeonyu1

hyeonyu.me

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## EDUCATION

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### International Masters in Image Processing and Computer Vision (IPCV)

Expected 2024

Pazmany Peter Catholic University, Budapest, Hungary

Autonomous University of Madrid, Madrid, Spain

University of Bordeaux, Bordeaux, France

### BSc with Specialization, Computing Science

2021

University of Alberta, Edmonton, AB

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## Technical

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### Languages

Python, Java , C/ C++, MATLAB, JavaScript, SQL

### Frameworks

PyTorch, TensorFlow, OpenCV, Keras, Einops, MMDetection

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## Projects

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### Vision Assistance

2023

- Application that guided a visual impaired pilot to pass through an obstacle course testing spatial orientation without touching any objects exposed as obstacles.

### Dr. Ankle

2021

- An auto labeling ankle fracture application with Faster RCNN model and Grad-CAM.

### Edmonton Housing Affordability Dashboard

2020

- Dashboard made for University of Alberta's Affordable Housing Solutions Team using React for frontend and Django for backend. Displays Edmonton's housing information such as rental market affordability, rental market vacancy and home price indices.

### Mandala

2020

- Distributed Social Networking web application made using Django and JavaScript. Allows distributing sharing of posts and contents within and with other node servers. Similar to Twitter.

### Omnifit Brain Force

2019

- Mobile game using TypeScript and Angular CLI to help enhance concentration by using EEG from Omnifit Brain.

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## Relevant Experience

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### Research Lab Intern

Jan 2022 – May 2022

Korea University MLV Lab, Seoul, Korea

- Assisting and tackling fundamental open problems in machine learning and computer vision to achieve a deep understanding of the visual world.
- Creating programs and models using Python and PyTorch.
- Working closely with mentors to assist in their projects and research related to representation learning and zero-shot/few-shot object detection.

Aug 2021 – Oct 2021

### AI Developer Intern

BasBai, Seoul, Korea

- Designed and implemented an auto labeling ankle fracture application based on an open source graphical image annotation tool called "Labelme".
- Developed an application that reads DICOM and NIfTI files and creates object detection COCO dataset.
- Hyperparameter tuning and training of CNN such as Faster RCNN to detect fractures in ankle x-rays using MMDetection.

### Freelance Backend Dev

May 2021 – Aug 2021

Flawless Inbound, Edmonton AB

- Part time contract to continue and work on new projects from the past internship.
- Identified and evaluated the needs of clients to create web applications that meet the desire and the needs of the clients.
- Implemented efficient web applications using HTML/CSS, AWS, HubSpot tools and JavaScript to create web applications.

### Part Time Backend Dev Intern

May 2021 – Aug 2021

Flawless Inbound, Edmonton AB

- One of the 50 funded positions from Technology Alberta's Jobs program.
- Researched, designed, implemented, and managed web application, database creation/query and API creation and maintenance.
- Worked closely with other developers, UX designers, business, and systems analysts to ensure the business goals of the web applications using HTML/CSS, AWS, HubSpot tools and JavaScript.

### Software Dev Intern

Apr 2019 – Aug 2019

Omni C&S, Seoul, Korea

- Worked closely with other developers to design, implement, and market Omnifit, a mental healthcare solution
- Developed a concentration game for OMNIFIT BRAIN: The Focus to help enhance concentration using JavaScript/TypeScript and Angular CLI

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## Awards

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### Winner - Cybathlon 2024

2023

- Part of the "EyeRider" team from the Bionic Vision Centre of Pazmany Peter Catholic University that won the Vision Assistance race of CYBATHLON Challenge.

### Erasmus+ Grant

2023

- Funding awarded to study in Europe.

### IPCV Excellence Scholarship

2022

- Full scholarship awarded as one of the top 3 non-European citizens that covers the total participation costs of the program.

### Technology Alberta FIRST Jobs Stipend

2021

- Stipend awarded for completing FIRST Jobs' work placement and professional development.

### Jason Lang Scholarship

2019

- Scholarship awarded for achieving a minimum Grade Point Average of 3.2 on a 4.0. scale based on 80% full course load in the previous fall and winter terms.