Jiun, Bae

Student. Interested in Artificial Intelligence, Computer Vision and Data Science.

Have experienced handling huge data for analyze and configure distributed processing system using docker or cloud instances. Reproduce many deep learning models and can modify.

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Education

Computer Engineering, Yonsei Univ. (MIRAE campus) (2014.03 – 2014.08)

Department of Computer Science, Hanyang Univ. (2015.03 – 2019.02)

M.S. Student, Computer Science, Hanyang Univ. Computer Vision Lab. (2019.03 – 2021.02)

Experience

Internship at Naver Clova Video (2020.07 – 2020.08)

Depth estimation in video continuous sequence

Advanced Computer Vision Staff Assistant (Samsung Human Resources Development Institute, <u>Samsung Advanced Institute of Technology</u>, Samsung System LSI)

Support IPIU 2020: 32nd Workshop on Image Processing and Image Understanding

Internship at NAVER Webtoon Research (2018.09 - 2019.02)

Develop annotation tool, Visual QA Workshop prepare

Internship at Computer Vison Lab (2017.09 – 2018.08)

Multi object tracking research

Overseas training program at <u>Draper Ulniv.</u> (2017.08 – 2017.09)

Internship at Mapianist (2017.07 – 2017.08)

Optical music sheet recognition and Android app programming

Mentee at SW Maestro 7th (2016.06 – 2017.07)

Deep Check: Face detection attendance check service

Memento: Automatic magazine creation service

Developer at Perigee Rocket LLC. (2015.03 – 2018.06)

Serial communication software (C/C++)

ICEWALL: Hanyang Univ. Student Cert. (2015.03 – 2019.02)

Hanyang Univ. webpage penetration test

ALOHA: Hanyang Univ. Algorithm Club (2015.03 – 2019.02)

Host on Hanyang Univ. algorithm competition

Contribute open source project CS231n Translation, NAVER

Awards

ACM ICPC 16th prize (Daejeon regional)

Top Start-up Team SW Maestro 7th Program (25,000\$)

Google Machine Learning Challenge 2017 5th prize

Projects

Mono-depth estimation with camera parameter (Naver Clova, 2020.07 – 2020.08)

Calculate camera parameters from video sequences.

Depth estimation by structure from motion using camera parameters

Fisheye object detection and tracking (CVLab, 2019.06 – 2020.02)

Object detection and tracking in large FOV fisheye lens

Export using LibTorch C++ for CPU inference

Webtoon Annotation Tool (NAVER Webtoon Research, 2018.09 – 2019.02)

Webpage based 2D bounding box and tag annotation tool

Manage dataset model with various custom query types

MariaDB Scalable Lock Manager (ITE4065, Hanyang Univ., 2018)

Latch-Free lock management (C/C++)

Reusable object pool with garbage collector

Increase select query performance more than 40% (Multi-threaded environment)

Memento (SW Maestro, 2017)

Crawling news and web-documents (Scrapy, Python)

Construct distributed processing system (docker)

Natural Language Processing

- Morphological analysis (KoNLPy with custom dictionary)
- Using extracted stop words from crawled data
- Vector embedding with doc2vec
- Named Entity Recognition

Clustering word vector (Ensemble hierarchy, k-mean cluster)

Deep Check (SW Maestro, 2016)

Face detection (Improve of YOLO, Python)

- Modify hyper parameters (grid size, conv filter size, ...)
- Ensemble multiple models

React-Native App and API server (Flask, Ruby on Rails)

<u>CS231n translate</u> (2015)

English to Korean translation project for the notes and assignments for Stanford CS class CS231n: Convolutional Neural Networks for Visual Recognition.

Publications

어안렌즈 환경에서의 객체 검출, 32nd Workshop on Image Processing and Image Understanding

비디오 영상에서 객체 검출과 객체 재식별을 이용한 객체 계수, 32nd Workshop on Image Processing and Image Understanding

Skills **Languages**

Python, C/C++, JAVA Strong
C#, HTML5, CSS, JavaScript, ES6, Node.js Comfortable
Haskell, R, Ruby, React.js Knowledgeable

Deep Learning Frameworks

PyTorch/LibTorch (C++), TensorFlow (Keras) Comfortable

Database

MySQL, MongoDB, Redis, Elasticsearch Comfortable

ETC

Docker, Git, Shell script

Subversion

Comfortable

Knowledgeable

- Try to write a test whenever possible and know that it can solve many problems.
- Know the advantages of strong typing and using type hinting in Python.
- Understand trade-off of parallelism, can create some lock-free data structures.
- Comfortable with the VCS, manage projects and communicate with using it.
- Have experience deploying projects using Docker and can use distributed system.
- Have basic knowledge of web development and create simple services.