Suyeong An

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https://godtn0.github.io

Education

- **Korea University** — Seoul, Republic of Korea
  Bachelor of Science in Computer Science and Engineering — Mar. 2017 – Present
  Major GPA: 4.47/4.5, Cumulative GPA: 4.31/4.5
- **Busan Science High school** — Busan, Republic of Korea
  Public science special-purpose high school — Mar. 2014 – Feb. 2017

Work Expreience

- **Sycros - Alternative Military Service** — Seoul, Republic of Korea
  Deep Learning Researching and Engineering for Time Series Dataset — Sep. 2020 – Present
  - Research computer resources, like CPU Usage, Memory Usage, Packet transfer amount, forecasting using deep learning for time series dataset.
    - Research time series forecasting and anomaly detection to service monitoring solution.
    - Research resampling way and forecasting model from irregularly and discretely sampled time series dataset to continuous random process by tracking the gradient of LSTM hidden state.
    - Using Tensorflow and pandas, implement and enhance generally used model based LSTM, Autoencoder and Transformer to forecast and detect abnormal data.
  - Perform fundamental of statistics and deep learning training session to employee and employer in Sycros.
- **VoyagerX - Internship** — Seoul, Republic of Korea
  Software Engineer with Video Processing — Mar. 2020 – Aug. 2020
  - Implement video editor with deep learning for video
    - Using React.js and Tensorflow.js, researching and engineering deep learning model to detect acne and to extract landmark from human face in video.
- **POG Korea - Developer** — Seoul, Republic of Korea
  Software Engineer with Video Processing — Jan. 2019 – Sep. 2019
  - Implement parking assistance service with video processing
    - Using classical methods and deep learning of computer vision to segment the car and parking slot using C++(OpenCV) and python(OpenCV, Tensorflow).
- **Microsoft Student Partner** — Seoul, Republic of Korea
  Announcing Microsoft's Azure Service — Aug. 2017 – Dec. 2018
  - Announcing Azure Machine Learning Studio

Research Experience

- **CVLAB,** Korea University — Seoul, Republic of Korea
  Undergraduate Researcher (Advisor: Prof. Seungryong Kim) — Dec. 2020 – Present
  - Research text-guided(multi-modal) image to image translation
    - Research extracting visual and text representation by the contrastive learning way and modify the image to fit the given text.
    - Research pixel level semantic matching with corresponding word in given text.
- **Artificial Intelligence Lab,** Korea University — Seoul, Republic of Korea
  Undergraduate Researcher (Advisor: Prof. Dongsuk Yook) — Dec. 2018 – Mar. 2019
  - Resolving pipelined back-propagation problem

Projects

- **Text-Guided Image to Image Translation** [code] Jan. 2021 - Apr. 2021
  - Extracting visual and text representation by the contrastive learning way and modify the image to fit the given text.
- **Computer Resources Forecasting** Sep. 2020 - Present
  - Researching computer resources forecasting, CPU Usage, Memory Usage, Packet In/Out amount, etc, using statistics models and deep learning models like LSTM and Transformer based model.
- **Question Answering Network for Physical Reasoning** Oct. 2019 - Dec. 2019
  - Combined DQN with question & answering module to make agent understand physical concepts.
- **Voice Data Analysis Using DNN and Product Recommendation System** Mar. 2019 - Jun. 2019
  - Analysis the age and gender information of speaker using deep neural networks.
  - Recommend product with maximizing profit using history of purchase.
- **Speech Recognition Using Baum-Welch Algorithm with GMM** [code] Sep. 2018 - Nov. 2018
  - Implement number speech recognition using Vaum-Welch algorithm and Viterbi algorithm with Gaussian Mixture Model.

Publications

- Hojoon Lee, **Suyeong An**, Hyunseung Kim, Dooho Chang, Taewan Lim, Question Answering Network for Physical Reasoning, 2019. (unpublished) [paper]
- Kihong Kim, Sangeun Kim, Changhoon Kim, **Suyeong An**, Kaeun Lee, New Anti-Peep Over Shoulder Technique Using Personalized Partial Images, Korean Institute of Information Scientists and Engineers, 2015. (1st Prize at Junior Paper Competition) [paper]

Skills

- **Programming Languages**
  Python, C, Java, Javascript, Typescript, React
- **Deep Learning Frameworks**
  Tensorflow, pytorch