

HyeongChan Kim

<https://github.com/kozistr>, <http://kozistr.tech/about>

EDUCATION

Korea University of Technology and Education (KOREATECH) Mar 2016 –

CHALLENGES

& AWARDS

6th place, **NAVER NLP Challenge**, SRL Task, 2018.

4th / 13th place, **NAVER A.I Hackathon**, 2018.

Final Round (Digital Forensic), **A.I R&D Challenge**, 2018.

2nd place (Demon), **Boot2Root** CTF, 2018.

2nd place (Demon), **WhiteHat League 1**, 2017.

3rd place (SeoulWesterns), **Harekaze CTF**, 2017.

9th place (3rd price, A book as award), **TF-KR MNIST Challenge**, 2017.

Kaggle Challenges :: Competition Expert

LB Top 2% Cornell Birdcall Identification (24 / 1395), 2020.

LB Top 4% Tweet Sentiment Extraction (84 / 2227), 2020.

LB Top 4% Flower Classification with TPUs (27 / 848), 2020.

LB Top 4% Bengali.AI Handwritten Grapheme Classification (67 / 2059), 2020.

LB Top 3%, Kannada MNIST Challenge (28 / 1214), 2019.

CTFs & Conferences

Conference Staff, **POC**, 2016.

Staff, Challenge Maker, **HackingCamp 15**, 2017.

Staff, Challenge Maker, **CodeGate OpenCTF**, 2017.

Staff, Challenge Maker, **HackingCamp 16**, 2017.

Challenge Maker, **POX CTF**, 2017.

Challenge Maker, **KID CTF**, 2017.

Staff, **Belluminar CTF**, 2017.

Staff, Challenge Maker, **HackingCamp 17**, 2018.

PUBLICATIONS

[2] Kim et al, [CNN ARCHITECTURE PREDICTING MOVIE RATING FROM AUDIENCE'S REVIEWS WRITTEN IN KOREAN](#). Jan. 2020.

[1] [zer0day](#), Windows Anti-Debugging Techniques (CodeEngn Archive) Sep. 2016.

INDUSTRY
EXPERIENCE

Watcha, Seoul, South Korea

Jun 2020 – Present

Machine Learning Researcher

- Developed a novel sequential recommendation architecture to recommend what to watch next.
 - Achieved SOTA performance compared to pervious SOTA models, BERT4Rec, etc...
- Developed Image Super Resolution model to upscale movie & tv posters, still-cuts.
 - Optimized the codes for fast inference time & memory-efficiency on cpu.
 - In internal evaluation (qualitative evaluation by the designers), it catches details better & handles higher resolution & takes a little time.
- Working as a full-time.

Rainist, Seoul, South Korea

Nov 2019 – Jun 2020

Machine Learning Engineer

- Developed the card & bank account transaction category classification models, designed light weight purpose for the low latency. (now on service)
 - In A/B (online) test result, improved **about 25 ~ 30%p accuracy, about 0.6%p 1+retention.**
- Developed the machine learning model serving RESTful API server (utilizing k8s + open source project).
 - **zero failure rate** (0 40x 50x error)
- Developed the classification model, forecasting possibility of loan overdue.
 - baseline model
- Worked as a full-time.

VoyagerX, Seoul, South Korea

Jan 2019 – Sep 2019

Machine Learning Engineer

- Developed speaker verification, diarization models & logic to recognize the arbitrary speakers recorded from the noisy (real-world) environment.
- Developed a hair image semantic segmentation / image in-paint / i2i domain transfer model to swap hair domain naturally.
- Worked as an intern.

ELCID, Pangyo, Korea

Jun 2016 - Aug 2016

Penetration Test

- Penetrated some products related to network firewall and anti-virus.

- Worked as a part-time job.

OUT SOURCING

Korea University Course Information Web Parsing, ITL July 2017 – Mar 2018
AWS CloudTrail logger analyzer / formatter, ELCID Sep 2019 – Oct 2019

RESEARCH EXPERIENCE

Heterogeneous Parallel Computing Lab, Cheonan, Korea Sep 2018 - Dec 2018
 Undergraduate Research

- Wrote a paper about improved TextCNN model for predicting movie rate.

TALKS

NAVER NLP Workshop 2018, Pangyo, Korea Dec 2018
 • SRL Task, challenging without any domain knowledge

PROJECTS

Generative

Awesome Generative Adversarial Networks (Stars 510+) July 2017 –
 Implemented lots of Generative Adversarial Networks in tensorflow 1.x. Novelities of
 this project are trying to implement lots of GANs which some of them are not
 released or in tensorflow 1.x based on the paper with some tweaks.

gan-metrics (Stars 3+) Mar 2020 –
 Implemented lots of metrics for evaluating GAN in pytorch.

I2I Translation

Improved Content Disentanglement (Stars 3+) Sep 2019
 Re-implement / tune 'Content Disentanglement' paper in pytorch.

Image Inpainting

Improved Edge-Connect (Stars 8+) Oct 2019
 Re-implement / tune 'Edge-Connect' paper in pytorch.

Style Transfer

Neural Image Style Transfer Mar 2018
 Implemented a neural image style transfer.

Segmentation

Awesome Segmentation (Stars 60+) Aug 2018
 Implemented lots of image semantic segmentation and ordered the papers.

Optimizer

AdaBound Optimizer (Stars 40+) Jan 2019
 Implemented AdaBound Optimizer (Luo et al. 2019) w/ some tweaks in tensorflow.

	RAdam Optimizer (Stars 4+)	Sep 2019
	Implemented RAdam Optimizer (Liu et al. 2019) w/ some tweaks in tensorflow.	
Super Resolution	Deep Residual Channel Attention Network (Stars 38+)	Sep 2018
	Implemented a RCAN model in tensorflow.	
	Enhanced Super Resolution GAN (Stars 25+)	Jun 2019
	Implemented an ESRGAN model in tensorflow.	
	Natural and Realistic SISR w/ Explicit NMD (Stars 5+)	Apr 2020
	Implemented a NatSR model in pytorch.	
NLP	Improved TextCNN (Stars 4+)	Dec 2018
	Implemented an improved TextCNN model (Kim et al. 2019)	
	Text Tagging	Dec 2018
	Implemented a text category classifier in tensorflow	
R.L	Rosseta Stone (Stars 460+)	Sep 2018-
	Hearthstone simulator using C++ w/ some R.L.	
	I contributed to this project by implementing 'feature extractor' and 'neural network' in libtorch++.	
Speech Synthesis	Tacotron	Jan 2019
	Implemented a google tacotron speech synthesis in tensorflow.	
Open Source Contributions	syzkaller	Apr 2018
	New Generation of Linux Kernel Fuzzer :: Minor contribution #575	
	simpletransformers	Apr 2020
	Transformers made simple w/ training, evaluating and prediction possible w/ one line each :: Minor contribution #290	