Sukmin Kim

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EDUCATION

The University of Hong Kong *Sept. 2017 - Present*
- Bachelor of Engineering in Computer Science *Hong Kong SAR*
- **CGPA: 3.72 / 4.3 (Major CGPA: 3.85 / 4.3)**
- A+ in Software Engineering, Applied Deep Learning, Calculus, Linear algebra, Probability & Statistics, Discrete Mathematics

North London Collegiate School Jeju *Sept. 2013 - Jun. 2017*
- **International Baccalaureate: overall score 42 / 45** *Jeju, South Korea*
- Achieved level 7 in all HL Subjects: Mathematics, Physics and Economics
- IGCSE (7 A* including Mathematics, Additional Mathematics and Biology)

SKILLS

Core Python, C/C++, Linux, Java, Git, LaTeX

Machine Learning Numpy, Pandas, Pytorch, Matplotlib, Scikit-Learn, Tensorflow, Keras

MLOps Pytorch Lightning, WandB

Web Development Django, HTML, CSS, PHP, Node.js, React

Database SQL, MySQL, MongoDB

Language English (*fluent*), Korean (*native*)
- GRE: Verbal (159, 81%), Quantitative (170, 96%), Writing (4.0, 54%)
- TOEFL IBT: 107 (Reading: 30, Listening: 28, Speaking: 23, Writing: 26)

RESEARCH EXPERIENCES

HKU MMLab *Sept. 2022 - Present*
Part-time Research Assistant
- Assisting research paper on autonomous driving, proposing metrics and dataset that predicts the accidents in driving scenario
- Planning to submit paper for *CVPR* 2023

Psuedo Lab *Aug. 2022 - Present*
Surgical Data Science Research Team member
- Researching on a method to differentiate between right and left hemiliver during surgery
- Proposing metric-based evaluation method of models, by categorizing labelling difficulty of ground truth labels from experts

URFP (Undergraduate Research Fellowship Programme) *Jul. 2022 - Aug. 2022*
- Proposed a method that pre-train model by masked image modelling, then finetune to the unsupervised domain adaptation in autonomous driving, supervised by Prof. Ping Luo

WORK EXPERIENCES

Psuedo Lab *Jul. 2021 – Nov. 2021*
Computer Vision Paper Reading Team member
- Reviewed and discussed papers and codes of recent computer vision research papers
- Presented three papers: AdaMatch, Self-Damaging Contrastive Learning and Meta Pseudo Labels

CERT (Computer Emergency Response Team) *Sept. 2019 - Apr. 2021*
2nd Corps Squad Leader
- Responded to potential cyber attacks including virus, port scan and malware
- Controlled several Linux servers and military security systems such as UTM and NAC

- Monitored 24/7 for potential vulnerabilities in the system

COMPETITIONS

Naver Clova AI Rush 2022 *Jul. 2022 - Aug. 2022*

Finalist with 800 USD cash prize

- Solved image classification task to classify Seoul landmark images
- Solved recommendation task to recommend music to users of Naver VIBE platform

Naver Clova AI Rush 2021 *May 2021*

Top 150 participant with 600 USD cash prize

- Solved image classification task to classify shopping images into three levels of hierarchical categories with limited computational resources

AWARDS / CERTIFICATES

HKU Foundation Entrance Scholarship *Sept. 2017 - Present*

- Received half tuition scholarship for the whole duration of undergraduate study

Dean's Honors List *Sept. 2018*

Deep Learning Specialization by DeepLearning.AI *May 2021*

Cisco Certification Network Associate (CCNA) *May 2019*

MOS Master 2016 Certificate *Aug. 2018*

PROJECTS

Whisk(e)y Classifier *Feb. 2022 - Apr. 2022*

- Built an application to detect whiskey from self-collected and labeled whiskey dataset using MMdetection framework
- Optimized the result with WandB logging, hyperparameter tuning and data quality improvement

Latent-is-all-you-need *Oct. 2021 - Nov. 2021*

- Implemented results from Variational AutoEncoder and Conditional Variational AutoEncoder
- Presented image reconstruction results with different latent dimensions and manifold learning results
- Used WandB to log results and metrics, and to tune deep learning hyperparameters.

MixMatch-AdaMatch-pytorch *Jul. 2021 - Aug. 2021*

- Implementated *MixMatch: A Holistic Approach to Semi-Supervised Learning* and *AdaMatch: A Unified Approach to Semi-Supervised Learning and Domain Adaptation*
- Investigated recent breakthrough in semi-supervised learning

Deep Learning paper study *Apr. 2021 - Present*

- Reviewed deep learning research papers and codes from fields of interest including self-supervised learning and 3D vision