HOJUN CHOI

AI Researcher, OPEN TO WORK

40, Geumgwang-ro, Jungwon-gu, Seongnam-si, Gyeonggi-do, South Korea

(+82) 10-7185-1250 | eric970412@gmail.com | https://hchoi256.github.io/ | https://www.linkedin.com/in/hojun-choi-2b10b11a0/

Research Interests

Computer Vision   3D Vision   Object Detection   Model Compression

Tech Stack

Programming Languages

Python | C | R | SQL

Frameworks

PyTorch | TensorFlow

Education

University of Wisconsin-Madison   *Seoul, South Korea*

B.S IN COMPUTER SCIENCE AND DATA SCIENCE   *Dec. 2022*

• GPA: 3.9/4.0

Publication

CONFERENCES

C1   S. Park, *H. Choi*, and U Kang. "Knowledge-preserving Pruning for Pre-trained Language Models without Retraining," Neural Information Processing Systems (**NeurIPS**) 2023 Conference Submission, May 2023.

Honors and Awards

2022	**Top 10% in Predicting Autonomous Sensor Antenna Performance, LG Research AI Hackathon**	*South Korea*
2022	**Nominated for Developing User-friendly Online History Search Chrome Extension, Hatathon**	*Madison, WI*
2022	**Dean's List for All Semesters Attended in Recognition of Exceptional Academic Excellence**	*Madison, WI*
2017	**Dean's List for All Semesters Attended in Recognition of Exceptional Academic Excellence**	*Albany, NY*

Professional Experience

Seoul National University   *Seoul, South Korea*

AI Researcher, Advisor: Prof. U Kang   *Jan. 2023 - July. 2023*

- *Specialized in AI model compression through quantization research.*
- *Contributed to a survey paper on lightweighting Transformer models using diverse quantization techniques.*
- *Co-authored a NeurIPS paper on model pruning, evaluating competing models and aiding with English translations.*

University of Wisconsin-Madison   *Madison, WI*

Undergraduate AI Research Intern, Advisor: Prof. Ran   *Sep. 2022 - Dec. 2022*

- *Simulated CADS operational life cycle in CARLA environment.*
- *Validated collaborative automated driving algorithms with DETR.*
- *Developed and tested new models in custom CARLA environment.*

University of Wisconsin-Madison   *Madison, WI*

Academic Mentor, Employer: Maisee Her   *Sep. 2021 −Dec. 2022*

- *Diligently mentored my mentees through academic counseling, resource sharing, and a sincere dedication to their success.*
- *Enhanced proficiency in crucial AI domains including Linear Algebra, Artificial Intelligence, Human-Computer Interaction, and C Programming.*

Projects

Object Detection for Autonomous Driving using DEtection TRansformer	*Madison, WI*
Implemented end-to-end detection techniques for large objects in the CARLA environment.	*Sep. 2022 - Dec. 2022*
CARLA Research Team Project	*Madison, WI*
Developed a comprehensive workflow for the Sensing·Perception Group CADS System using the CARLA simulator.	*Sep. 2022 - Dec. 2022*
Database Development	*Madison, WI*
Understood core techniques of DBMS and constructed a database structure for real-world problems using MySQL.	*Sep. 2022 - Dec. 2022*
Visitory	*Madison, WI*
Developed a user-friendly interactive internet history search Chrome extension.	*Jan. 2022 - May. 2022*
Operating Systems	*Madison, WI*
Explored MapReduce, memory encryption, file systems, lottery scheduler, shell, and xv6 kernel threads.	*Jan. 2022 - May. 2022*
Data Modeling with Python & R	*Madison, WI*
Explored data visualization, version control, A/B testing, classification, clustering, optimization, simulation techniques, and more.	*Jan. 2022 - May. 2022*
Human-Computer Interaction Report Papers	*Madison, WI*
Explored IT support interactions at LTG helpdesk, Memorial Library. Various methods used. Details in processbook.	*Sep. 2021 - Dec. 2021*
Cardiovascular Disease Risk Factor Analysis	*Madison, WI*
Examined causal relationships among variables using statistical models and visualized results through graphs in R.	*Sep. 2021 - Dec. 2021*
COVID-19 Self-Checker	*Madison, WI*
Developed a simple self-diagnostic analysis CPP software for COVID-19 symptoms.	*Jan. 2021 - May. 2021*
A Free Website for Short-Term Memory Testing	*Madison, WI*
Implemented a multi-threaded timer in the back end and enabled parsed data transfer among pages through RestAPI.	*Sep. 2020 – Dec. 2022*
Time Clock System	*South Korea*
Designed C# Windows software for employee attendance tracking, utilizing a MYSQL-based database with SQL.	*Jan. 2019 - May. 2019*
Unity Games Development	*South Korea*
Created game architectures and optimized graphics performance by batching game objects within the hierarchy.	*May. 2018 - Aug. 2018*
Automation System Development	*South Korea*
Analyzed data assignment patterns by component in the company's platform and developed software for multilingual tasks.	*Feb. 2018 - May. 2018*

Teaching

PRIVATE TUTOR, REMOTE, OCTOBER 2022 – PRESENT

Summer 2023	Mathematical Statistics with Applications, graduate-level
Spring 2023	Mathematical Statistics with Applications, graduate-level
Spring 2023	English Speaking Tutoring, Intermediate-level
Fall 2022	Linear Algebra, undergraduate-level

ACADEMIC MENTOR, UW-MADISON, MADISON, WI, SEPTEMBER 2021 – DECEMBERE 2022

Fall 2022	Introduction to Human Computer Interactions (CS570), undergraduate-level
Fall 2022	Introduction to Artificial Intelligence (CS540), undergraduate-level
Spring 2022	Elementary Matrix and Linear Algebra (CS340), undergraduate-level
Spring 2022	Introduction to Computer Systems (CS354), undergraduate-level
Spring 2022	Programming III (CS400), undergraduate-level
Fall 2021	Elementary Matrix and Linear Algebra (CS340), undergraduate-level
Fall 2021	Introduction to Computer Engineering (CS252), undergraduate-level

Professional Activities

COMMUNITY SERVICE

English Translation, NAVER Knowledge iN	*Seoul, South Korea*
Online Freelance English Translation Expert	*May. 2022 - Present*

CERTIFICATIONS

NLP Development Program, Seoul ICT Innovation Square *Remote*

Trainee *July. 2022 - Sep. 2022*

Machine Learning A-Z: Hands-on Python And R, Udemy *Remote*

Trainee *Aug. 2022 - Aug. 2022*

Machine Learning Practical Development: 8 Practical Projects, Udemy *Remote*

Trainee *Aug. 2022 - Aug. 2022*

LG Aimers, LG AI Research *Remote*

Trainee *July. 2022 - Aug. 2022*

AI Engineering Program, Seongnam Industry *Remote*

Trainee *July. 2022 - Aug. 2022*

Intensive English Language Program (IELP), University at Albany-SUNY *Albany, NY*

Trainee

ORGANIZATIONS

CAVH Graduate Student Research Group, University of Wisconsin-Madison *Madison, WI*

Member

Computer Science Undergraduate Research Group, University of Wisconsin-Madison *Madison, WI*

Member

Student Software Development Club, University of Wisconsin-Madison *Madison, WI*

Member

References

References are provided upon request.