Hojun (Eric) Choi

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RESEARCH INTERESTS

Reinforcement Learning ● Deep Learning ● Model Compression/Optimization ● Hyper-scale AI

SKILLS

PROGRAMMING LANGUAGES
- Python, C, SQL, Java, R, C++, C#, JavaScript

FRAMEWORKS
- PyTorch, TensorFlow, Keras

EDUCATION

Seoul National University

M.S./Ph.D. in Artificial Intelligence | 2023-current
Advisor | Prof. U. Kang

University of Wisconsin, Madison

B.S. in Computer Science and Data Science | Dec 2022
Advisor | Dr. Michael Radloff and Dr. Sara Rodock

HONORS AND AWARDS

2022 LG Research Hackathon | 2022
Ranked top 10% on hackathon with the topic of predicting the antenna performance of autonomous sensors

2022 Hatathon Nomination, Undergraduate Research Lab (UPL) | 2022
Built a human-friendly interactable internet history search chrome extension

Dean's List, All semesters in attendance | 2017-2022
The highest level of academic achievement

PROFESSIONAL EXPERIENCE

UNIVERSITY OF WISCONSIN – MADISON | UNDERGRAD. AI RESEARCHER
2022-Currnet | MADISON, WISCONSIN
MENTOR: Prof. Ran
- Simulated the operational life cycle of the CADS in the CARLA environment.
- Validated the developed algorithms of collaborative automated driving.
- Developed and test new models in the customized environment and the CARLA environment.

UNIVERSITY OF WISCONSIN – MADISON | ACADEMIC MENTOR
2021-Current | MADISON, WISCONSIN
EMPLOYER: Masiee Her
- Assisted my mentee by giving academic advice, sharing resources, and caring about my students' success.
- Horned my skills in major domain areas of AI; Linear Algebra, AI, HCI, C Programming, etc.

MAPAL HITECO, INC. | PRODUCTION TEAM & SW DEVELOPER INTERN
2018-2020 | SIHEUNG-SI, SOUTH KOERA

- Designed and implemented automated data mapping tools for ERP platform with multi-language contents.
- Provided maintenance services on the company's website and ERP platform.
- Developed time clock systems to check employees' attendance.

PROJECTS

Model Compression for Full-shot, Few-shot, and Zero-shot | 2023-2026
Compressed a pre-trained model ResNet-34 with ImageNet, using pruning, quantization, and knowledge distiliation.

Object Detection for Autonomous Driving using DEtection TRansformer | 2022
Implemented end-to-end detection techniques for large objects in the CARLA environment.

Database Development | 2022
Undertanding of core techniques of DBMS & Building a databse structure on real-world problems using MySQL.

CARLA Research Team Project | 2022
Built a complete workflow of Sensing·Perception Group CADS System using CARLA simulator.

AI Software and Applications | 2022
A full list of my AI projects (may need to be updated).

Visitory – Hatathon | 2022
Built a human-friendly interactable internet history search chrome extension.

Introduction to Operating Systems | 2022
MapReduce, memory encryption, file system, lottery scheduler, shell, and xv6 kernel threads.

Data Modelings with Python & R | 2022
Data visualization, version control, A/B testing, classification, clustering, optimization, simulation techniques, etc.

Human-Computer Interaction Report Papers | 2021
Investigated the problem domain of three different settings.

Cardiovascular Disease Risk Factor Analysis | 2021
Analyzed causal relationships among actors using statistical models & visualized the results through graphs in R.

COVID-19 Self-Checker | 2021
A simple self-diagnostic analysis software for COVID-19 symptoms.

A Free Website for Short-Term Memory Testing | 2020
Implemented multi-threaded timer in back-end and parsed data transfer among pages through RestAPI.

Time Clock System | 2019
A window software for employee' attendance tracker.

Unity Games Developments | 2018
Designed game architectures and optimized graphics performance by batching game objects with hierarchy.

Automation System Development | 2018
Analyzed patterns of data assignment by component in the company's platform and developed software for multilingual tasks.

TEACHING EXPERIENCE

Private Tutoring

Course	Linear Algebra
Instructor	Hojun (Eric) Choi
Location	Remote (Kimstudy)
Period	2022-current

Academic Mentor

Course	Introduction to Human Computer Interactions (CS 570)
Instructor	Prof. Jacob Thebault-Spieker

Location | University of Wisconsin, Madison
Semester | Fall 2022

- **Academic Mentor**

  Course | Introduction to Artificial Intelligence (CS 540)
  Instructor | Prof. Jerry Zhu
  Location | University of Wisconsin, Madison
  Semester | Fall 2022

- **Academic Mentor**

  Course | Elementary Matrix and Linear Algebra (MATH 340)
  Instructor | Prof. Alexander Hanhart
  Location | University of Wisconsin, Madison
  Semester | Fall 2021, Spring 2022

- **Academic Mentor**

  Course | Introduction to Computer Systems (CS 354)
  Instructor | Prof. Michael Doescher
  Location | University of Wisconsin, Madison
  Semester | Spring 2022

- **Academic Mentor**

  Course | Programming III (CS 400)
  Instructor | Prof. Gary Dahl
  Location | University of Wisconsin, Madison
  Semester | Spring 2022

- **Academic Mentor**

  Course | Introduction to Computer Engineering (CS 252)
  Instructor | Prof. James Skrentny
  Location | University of Wisconsin, Madison
  Semester | Fall 2021

MENTORED STUDENTS

- Sharmin Akter Chowdhury | 2021-2022
  Institution | University of Wisconsin, Madison
  Degree Level | Undergraduate
  Major | Computer Science

- Jeremiah Dominick Lipscomb | 2022
  Institution | University of Wisconsin, Madison
  Degree Level | Undergraduate
  Major | Computer Science

- Isaac Odeoyin | 2021
  Institution | University of Wisconsin, Madison
  Degree Level | Undergraduate
  Major | Computer Science

PROFESSIONAL ACTIVITIES

CONFERENCE REVIEWS
ICLR, NeurIPS, CVPR, arXiv, ICPR, AAAI, etc. | 2021-current

ONLINE FREELANCE ENGLISH TRANSLATION EXPERT, NAVER KNOWLEDGE IN
- Equipped with professional Korean-to-English translation expertise | 2016-current

LG TECHNICAL CERTIFICATE PROGRAM IN MACHINE LEARNING, LG RESEARCH
- Absorbed the state-of-the-art AI technology of autonomous driving and radar sensors | 2022

NLP CERTIFICATION PROGRAM, SEOUL ICT INNOVATION SQUARE
- Equipped with core knowledge and expertise in the in-demand field of NLP | 2022

AI ENGINEERING PROFESSIONAL CERTIFICATE, ABLEARN AND SEONGNAM INDUSTRY
- Online Certified AI ENGINEERING Certification Training | 2022

CERTIFICATE OF COMPLETION: MACHINE LEARNING A-Z: HANDS-ON PYTHON AND R
- Learned to create ML algorithms in Python and R from two Data Science experts | 2022

CERTIFICATE OF COMPLETION: INTENSIVE ENGLISH LANGUAGE PROGRAM
- Completed the IELP with the highest level at the University at Albany - SUNY | 2016

ORGANIZATION

CAVH GROUP, UW-MADISON
- Graduate Student Research Group in the Depart. of Civil and Environmental Engineering | 2022

ARTIFICIAL INTELLIGENCE CLUB, UW-MADISON
- A project-based organization committed to bringing together students with an interest in AI | 2022

UNIVERSITY WISCONSIN UNDERGRADUATE PROJECT LAB
- UW Madison Computer Science Undergraduate Research Membership | 2022

STUDENT SOFTWARE DEVELOPMENT CLUB
- UW Madison Student Software Development Membership | 2021