Wookyung Jeong

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https://wookyungjeong.com/
https://github.com/manoflearning

INTERESTS Deep Learning, AI Low-level Optimizations, Algorithmic Problem Solving

EDUCATION

Jeonbuk National University   Mar 2019 - Present
Undergraduate Student   Jeonju, Korea
- B.S. in Computer Science and Engineering
- Minor: B.S. in Mathematics

HONORS AND AWARDS

International Collegiate Programming Contest (ICPC)
- **55th Place, ICPC Asia Pacific Championship**, 2024
- 18th Place, ICPC Asia Jakarta Regional, 2023
- 31th Place, ICPC Asia Seoul Regional, 2023
- 36th Place, ICPC Asia Seoul Regional, 2022

5th / 3rd Place, Jane Street's Electronic Trading Challenge (ETC), 2023

5th Place Prize, Hyundai Mobis Programming Contest, 2023

Finalist, Samsung Collegiate Programming Cup, 2022 - 2023

Round 3 Qualifier (Top 500), Meta Hacker Cup, 2022

Master (Max Rating 2197, Top 1.59%), Codeforces, 2020 - Present

PROJECTS

Cranberry | Deep Learning, Rust, Python   Mar 2024 - Present
- Developed a deep learning library from scratch using Rust and Python.
- Implemented tensor operations, including binary ops (add, mul, etc.), reduce ops (sum, max, etc.), movement ops (reshape, expand, etc.), and others (matmul, softmax, cross entropy, etc.).
- Verified correctness by comparing outputs with PyTorch.
- Provides a user-friendly API similar to PyTorch, ensuring ease of use and familiarity for users.

CP Reference Codes | Algorithm, C++   Jun 2020 - Present
- Built a programming library with documentation for competitive programming contests.
- Researched cost-efficient and concise implementations of data structures and algorithms, including disjoint set union, segment tree, and centroid decomposition, and implemented them in C++.

EXPERIENCE

Medical AI & Computational Science Laboratory, Jeonbuk National University   Apr 2024 - Present
Research Intern (Advisor: Prof. Kyungsu Lee)   Jeonju, Korea

Visual Computing Laboratory, Jeonbuk National University   Nov 2023 - Apr 2024
Research Intern (Advisor: Prof. Hyungki Kim)   Jeonju, Korea
- Learned the fundamental concepts of machine learning and deep learning, from MLP to Transformer.
- Reviewed papers in the field of 3D reconstruction, including NeRF, 3D Gaussian Splatting.

ACTIVITIES

Union of Clubs for Programming Contests   Mar 2023 - Present
Vice President   Seoul, Korea
- Served as the Vice President at UCPC, a union of 34 clubs from 33 universities in Korea.
- Main organizer of **Good Bye, BOJ 2023! / Hello, BOJ 2024!**, a Korean year-end / new year programming competition. Primarily responsible for sponsor contact and coordination: Samsung Electronics, LG Electronics, Hyundai Mobis, Moloco, Jane Street, etc.
- Organizer of **UCPC 2023**, a Korean programming competition with 660+ participants. Organized onsite contest with about 150 participants.

SKILLS

Programming Languages: C, C++, Python, Rust
Machine Learning: PyTorch, TinyGrad
Other Skills: Git/GitHub, LaTeX
Languages: Korean (Native), English (Upper Intermediate)