Hyunbin Kim

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EDUCATION

- **Ajou University** *Mar '19 - Current*
  Department of Computer Engineering GPA : 4.36/4.5

EXPERIENCE

- **NetSys Lab. (Prof. Younghoon Kim)** *Mar '25 - Current*
  Undergraduate Internship Suwon, Korea

  – Researching Linux networking subsystem and extended BPF (eBPF) for system-level performance and programmability

- **Theory of Natural Computation Lab. (Prof. Dajung Cho)** *Dec '23 - Dec '24*
  Undergraduate Internship Suwon, Korea

  – Researched a string operation called *Abelian duplication* from a formal language theory perspective, focusing on decision problems and closure properties

PUBLICATION

- **Abelian duplications on strings and string searching algorithms**
  Hyunbin Kim, Chiwook Ahn, Dajung Cho
  Korea Computer Congress 2024 (KCC '24), Jeju, South Korea, June 26-28, 2024 **(Excellent Paper Award)**

- **Algorithms for Searching Maximum-Length Abelian Duplications in Strings**
  Hyunbin Kim, Dajung Cho
  KIISE Transactions on Computing Practices (KTCP '25)

- **Online Approaches for Abelian Duplication in Strings : Design and Applications**
  Hyunbin Kim, Dajung Cho
  Korea Conference on Software Engineering 2025 (KCSE '25), Pyeongchang, South Korea, Jan 20-22, 2025

RESEARCH INTERESTS

- **Computer Architecture and Systems, Compiler**
- **Algorithm -** graph theory, geometry, string algorithm

ACTIVITIES AND PROJECTS

- **Union of Clubs for Programming Contest (UCPC)** *Jan '25 - Sep '25*
  Vice president

  – Largest algorithmic problem solving club union(30+ Universities) in Korea
  – Designed set of problems(submitted 1 problem), sponsor communication, organizing seminar

- **shake! - 2022, 2023, 2024** *Sep-Jan {'22, '23, '24}*
  Director, Problem setter

  – Annual ICPC-style college union programming contest for 6 universities in Kyongin Region
    * Participants : {Ajou, Hanyang-ERICA, Inha, Korea Aerospace, Kyunghee, Sungkyunkwan, Dankook} Univ.
  – Designed set of problems
    * 2022 : Submitted 2 problems (Problem B, C)
    * 2023 : Submitted 2 problems (Problem A, C)
    * 2024 : Submitted 3 problems (Problem B, F, J)

- **Ajou Programming Contest (APC) - 2022, 2023 ,2024 ,2025**   *Mar - May {'22,'23,'24, '25}*
  Director, Problem setter

  – Annual ICPC-style programming contest held in Ajou Univ.
  – Designed set of problems
      * 2022 : Submitted 3 problems / 2023 : Submitted 7 problems / 2024 : Submitted 4 problems / 2025 : Submitted 2 problems

- **Analyze 'N Solve It (ANSI)**   *Jan '23 - Current*
  Member, Vice president

  – Algorithmic problem solving club in Ajou University
  – Ran algorithmic problem solving study group – {Intermediate, Advanced} Algorithm study group
  – Directed several programming contests

FURTHER SKILLS AND QUALIFICATIONS

- **Software Skills :** C/C++, LaTeX

- **Language :** Korean(Native), English(Upper intermediate)

ACHIEVEMENTS AND HONORS

* ICPC : International Collegiate Programming Contest

- **Excellence Award,** '24 Fall, Ajou Softcon – Research section   *Dec '24*
- **Honor,** 2024 ICPC Jakarta Regional   *Dec '24*
- **Honor,** 2024 ICPC Seoul Regional   *Nov '24*
- **Excellent Paper Award,** Korea Computer Congress 2024 (KCC '24)   *Jul '24*
- **34th place,** 2023 ICPC Seoul Regional   *Nov '23*
- **59th place,** 2022 ICPC Seoul Regional   *Nov '22*
- **Finalist,** 2023 Samsung Collegiate Programming Cup ('23 SCPC)   *Aug '23*
- **Academic Scholarship (Daewoo Scholarship – College Top Rank)**, Ajou University   *Jul '25*
- **Academic Scholarship (Yulgok Scholarship)**, Ajou University   *Dec '24*
- **Academic Scholarship (Yulgok Scholarship)**, Ajou University   *Dec '23*
- **Academic Scholarship (Yulgok Scholarship)**, Ajou University   *Dec '22*
- **Academic Scholarship (Yulgok Scholarship)**, Ajou University   *Jul '20*