

# Hyunbin Kim

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## RESEARCH INTERESTS

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- **Programming Language, Compiler**
- **Algorithm** - graph theory, geometry, string algorithm

## PUBLICATION

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- **Abelian duplications on strings and string searching algorithms**  
Hyunbin Kim, Chiwook Ahn, Dajung Cho  
*Korea Computer Congress, 2024 (KCC '24) (Excellent Paper Award)*
- **Algorithms for Searching Maximum-Length Abelian Duplications in Strings**  
Hyunbin Kim, Dajung Cho  
*KIISE Transactions on Computing Practices, 2025 (KTCP '25)*
- **Online Approaches for Abelian Duplication in Strings : Design and Applications**  
Hyunbin Kim, Dajung Cho  
*Korea Conference on Software Engineering, 2025 (KCSE '25)*

## EDUCATION

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- **Korea Advanced Institute of Science and Technology (KAIST)** *Mar '26 - Current*  
*M.S. in School of Computing* Daejeon, Korea  
– Advised by: Kihong Heo, *Prosys lab*
- **Ajou University** *Mar '19 - Feb '26*  
*B.S. in Department of Computer Engineering* Suwon, Korea  
– Graduated *Summa Cum Laude*  
– *Distinguished Graduate Award*, recognized for distinguished external achievements

## EXPERIENCE

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- **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

## ACTIVITIES AND PROJECTS

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- **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, handled communication with international sponsors, organized seminar
- **shake! - 2022, 2023, 2024, 2025** *Sep-Jan {'22, '23, '24, '25}*  
*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, submitted 8 problems total
- **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, submitted 16 problems total
- **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, Extreme} Algorithm study group
  - Directed several programming contests

## FURTHER SKILLS AND QUALIFICATIONS

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- **Software Skills** : C/C++, L<sup>A</sup>T<sub>E</sub>X
- **Language** : Korean(Native), English(Upper intermediate)

## ACHIEVEMENTS AND HONORS

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\* ICPC : International Collegiate Programming Contest

- **Distinguished Graduate Award**, Ajou University *Feb '26*
- **Excellence Award**, '24 Fall, Ajou Softcon – Research section *Dec '24*
- **Honorable mention**, 2025 ICPC Seoul Regional *Nov '25*
- **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*