

THIBAUD SOUTHIRATN

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SUMMARY

M.S. and M.Eng. dual degree student in Computer Science, AI and Engineering.

Currently looking for opportunities as an **AI Engineer** or **Research Scientist** in the field of Drug Discovery. Available from November 2025.

SKILLS

- **Deep Learning & Cheminformatics**
PyTorch, Transformers, RDKit, PyMOL, AutoDock Vina.
- **Programming & Tools**
Python (mainly), Java, Jupyter, LaTeX, HTML/CSS.
- **Software Engineering**
Git, Shell, Docker, HPC (CUDA, Parallel computing).
- Adaptability, Problem-solving, Team-work.


WORK EXPERIENCES

- Aug 2025
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Sept 2023 **AI Researcher • RESEARCH, 2 YEARS** **Bio & Health Informatics Lab • Seoul, Korea**
- Published a paper in a top-tier AI conference (ICML'25).
 - My work is currently used to attempt identifying selective CDK7 kinase inhibitors in a CRO.
 - Co-authored a paper in a domestic conference (KCC'24, Korea).
 - Peer-reviewed 4 papers (2x ICML'25, NeurIPS'25, KDD'24).
 - Teaching assistant: Lecturing & Mentoring
Spring 2025 — "Machine Learning in Bioinformatics" (~50 students).
 - Fall 2024 — "Computer Convergence Application" (~50 students).
 - *Topics*: Generative Models and Algorithms for Biomedicine and Cheminformatics.
- July 2022
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May 2022 **Software Engineer Intern • INTERNSHIP, 3 MONTHS** **Serve The City Paris • Paris, France**
- Led development and deployment of a CRM platform to facilitate recruitment process.
 - Implemented a membership management algorithm (~300 members).
 - Volunteered in activities supporting the aid of homeless & marginalized people (~100 people).
 - *Technologies*: Python, JavaScript (Node.js), NotionAPI.



EDUCATION

- Aug 2025
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Sept 2023 **M.S. in Computer Science and Engineering** **Seoul National University, Korea**
- Bio and Health Informatics Lab, advised by Prof. Sun Kim.
 - *Coursework*: Artificial Intelligence, Bioinformatics, Generative AI.
 - *GPA*: 3.82/4
- Dec 2025
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Sept 2021 **M.Eng. in Computer Science and Engineering** **(Grande École) Télécom SudParis, France**
- *Coursework*: Machine Learning, Computer Vision, Network & Software Engineering.
 - *GPA*: 3.77/4
- June 2021
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Sept 2018 **Preparatory Class for Engineering** **Lycée Lakanal, France**
- Nationwide competitive exams.
 - *Coursework*: Mathematics, Physics, Chemistry.

PUBLICATIONS

- CombiMOTS: Combinatorial Multi-Objective Tree Search for Dual-Target Molecule Generation**  **ICML'25**
Thibaud Southiratn, Bonil Koo, Yijingxiu Lu, Sun Kim
- Web-based Exploratory Data Mining System for Analyzing the Gene-level Relationship between Intratumoral Heterogeneity of Promoter DNA Methylation and Drug Response** **2024 Korea Computer Congress**
Tae Hoon Kweon, Bonil Koo, Sungjoon Park, Thibaud Southiratn, Sun Kim

PROJECTS

- Selective CDK7 Inhibitor Generation • PARETO OPTIMIZATION/MONTE-CARLO TREE SEARCH/PROPERTY PREDICTION** 
- Adapted CombiMOTS to attempt unveiling molecules biochemically active to CDK7 & inactive to CDK1-2-5-9-12-13.
 - Identified potent candidates with motifs/warheads (acrylamide, chloroacetamide) found in relevant literature.
- Efficient Molecule Captioning • TRANSFORMERS/CHEMICAL LANGUAGE MODELS** 
- Fine-tuned a Chemical LM (Text+ChemT5) to **improve performance (up to +5.4%)** on the "mol2text" task.
 - Adapted an implementation of Speculative Decoding to **infer captions faster (+36.5%)** without changing output distribution.

LANGUAGES

- **French** • Native
- **English** • Fluent
- **Spanish** • Intermediate
- **Korean** • Scholar

INTERESTS

- **Gaming** (Peaked top 1% Europe on CS:GO & Valorant)
- **Photography** (Adobe Lightroom/Photoshop)
- **Weightlifting**
- **Try everything**