# Chiharu Hagiwara

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## SUMMARY

I have long been passionate about science, with a particular interest in both medicine and informatics.    In high school, I honed my skills in computer science by participating in programming competitions such as the Japanese Olympiad in Informatics.    These experiences not only enhanced my problem-solving abilities through informatics but also fueled my desire to apply these skills to other scientific fields.    After entering medical school, I became eager to explore the integration of information science with medicine.    Currently, I am conducting research in medical machine learning at RIKEN, and plan to contribute to developing AI-driven solutions that enhance healthcare.

## EDUCATION

**Tokyo Medical and Dental University** (Tokyo, Japan) April 2023 - present
> Bachelor of Medicine candidate / Diploma expected 2029.

**Oin Highschool** (Tokyo, Japan) April 2017 – March 2023

## WORK EXPERIENCE

**RIKEN Information R&D and Strategy Headquarters**
**Medical Data Deep Learning Team** (Tokyo, Japan) / May 2024 – present
> I am working as Research Part-time Worker II, focusing on expanding my knowledge in the application of deep learning to medical and health data.    I plan to research my project in the future, focusing on improving clinical efficiency.

**Japan Committee of International Olympiad in Informatics** (Tokyo, Japan) / April 2023 - present
> I serve as a tutor, providing technical support for the organization of the Japanese Olympiad in Informatics (official website in Japanese).

## HONORS and AWARDS

2021:    Achieved 5th place in the Japan Olympiad in Informatics for Girls.
2022:    Selected as a finalist for the Japanese delegation to the European Girls' Olympiad in Informatics (press release in Japanese).

These are competitive programming contest for pre-university students, focusing on algorithm development and efficient problem-solving.    They helped me develop algorithmic thinking.

## SKILLS

**Computer Programming**

- Over 5 years of coding experience in C++ and Python, solved more than 2000 competitive programming problems.
- Proficient in implementing machine learning models, data analysis, mathematical problem-solving algorithms, and web applications.
- Currently learning infrastructure construction using AWS services with a focus on EC2.

**Languages**

Business level English; experience in email correspondence, meetings, and presentations.

## EXTRA-CURRICULAR ACTIVITIES

Aug.-Sep. 2023: Accompanied the 35th International Olympiad in Informatics (official website).
I supported the Japanese team by liaising with the management and translating competition problems.

September 2023: Participated in Medical-Healthcare AI-Design Program 2023, supported by the Program on Open Innovation Platforms for Industry-Academia Co-Creation (introduction PDF), Japan Science and Technology Agency.
During this two-week healthcare hackathon, my team focused on creating a system that uses machine learning to predict allergy risk using fewer common blood tests, addressing the time and cost constraints of traditional allergy testing.

## CERTIFICATIONS

December 2023: **JSBi Certified Bioinformatics Engineer** (official website in Japanese)
Certified by the Japanese Society for Bioinformatics, demonstrating knowledge of bioinformatics from basic to advanced levels, including areas such as life sciences, computational science, sequencing, structural analysis, genetic and evolutionary analysis, and omics analysis.   I passed the exam in the top 30% of test takers.

April 2019: **Information Technology Passport Examination** (official website in Japanese)
This national exam certifies comprehensive IT knowledge, covering IT management, technical skills, and general management practices.

## RESEARCH INTERESTS

I am particularly interested in applying machine learning to address current clinical challenges, focusing on enhancing diagnosis, treatment, and optimizing healthcare efficiency.   My primary area of interest lies in neuroscience, with a specific focus on applying machine learning to better understand brain function and neurodegenerative disease.