

様式 A-1

2026年 7月 7日

サイエンス・ダイアログ 実施報告書

1. 学校名: 浦和明の星女子高等学校
2. 講師氏名: Dr.Ziling HUANG
3. 講義補助者氏名: なし
4. 実施日時: 2026年6月27日 (土) 10:00 ~ 12:00
5. 参加生徒: 1年生 30人、 2年生 16人、 3年生 2人 (合計 48人)
備考: (例: 理数科の生徒)

6. 講義題目: Introduction to AI : How Machine Learn and Think

7. 講義概要:

My research focuses on helping computers understand images and videos using natural language. For example, if you ask "Where is my mother in this photo?" or "Which sheep is standing next to the man?", AI should be able to find the correct object in the image. To achieve this, I study how machines learn connections between visual information (pixels) and human language. This technology is widely used in image search, photo management, intelligent assistants, and AI systems such as ChatGPT with vision capabilities. My goal is to make AI understand the world more like humans do, so that it can interact with people more naturally and helpfully.

8. 講義形式:

☐ 対面 ・ ☒ オンライン (どちらか選択ください。)

- 1) 講義時間 50分 質疑応答時間 30分

- 2) 講義方法 (例: プロジェクター使用による講義、実験・実習の有無など)
PowerPoint を使用した Zoom による講義 (台風接近による休校のため)

- 3) 事前学習

☒ 有 ・ ☐ 無 (どちらか選択ください。)

使用教材: プリント配布 (①キーワードと要旨 ②スライド資料)、校内図書館にコーナーの設置

9. その他特筆すべき事項:

なし

Form B-2

Date (日付) 26/06/2026
(Date/Month/Year: 日/月/年)

Must be typed

Activity Report -Science Dialogue Program-
(サイエンス・ダイアログ 実施報告書)

1. Fellow's name (講師氏名): Ziling Huang (ID No. P25400)

2. Name and title of the lecture assistant (講義補助者の職・氏名)

3. Participating school (学校名): Urawa Akenohoshi Girls' Junior and Senior High School

4. Date (実施日時): 27/06/2026 (Date/Month/Year: 日/月/年)

5. Lecture format (講義形式):

◆ ☐ Onsite ・ ☒ Online (Please choose one.) (対面 ・ オンライン) (どちらか選択ください。)

◆ Lecture time (講義時間) 60 min (分), Q&A time (質疑応答時間) 30 min (分)

◆ Lecture style (e.g., used projector, conducted experiments)

(講義方法 (例: プロジェクター使用による講義、実験・実習の有無など))

zoom

6. Lecture title (講義題目):

Introduction to AI: How machines learn and think.

7. Lecture summary (講義概要): Please summarize your lecture within 200-500 words.

This lecture introduces artificial intelligence, or AI, to high school students in a simple and friendly way. It begins with the speaker's personal motivation for becoming a researcher, including curiosity, challenge, and the hope that research can help people. The lecture also shares the speaker's experience as a female researcher and encourages students, especially girls, to believe that science and AI can be for them.

The main topic of the lecture is how machines learn and think. First, the lecture explains that AI means making machines do tasks that usually need human intelligence, such as recognizing faces, understanding speech, translating languages, recommending videos, or answering questions. It also explains the difference between traditional machines and AI machines: traditional machines follow fixed rules written by humans, while AI machines learn patterns from data.

Next, the lecture explains machine learning using a simple example of classifying cats and rabbits. The model learns from labeled training data, makes predictions, compares its prediction

with the correct answer, and improves by learning from mistakes. This leads to the idea of deep learning, a powerful method that can learn complex patterns from large amounts of data.

The lecture then explains how ChatGPT works. ChatGPT predicts the next word or token step by step based on context. It can learn grammar, facts, common sense, style, and some reasoning patterns from training data. However, it does not understand the world like humans do and does not have feelings, goals, or responsibility.

Finally, the lecture discusses what AI can and cannot do. AI can be useful for translation, recommendations, and brainstorming, but humans must check important information and make final decisions in serious areas such as scholarships or medical diagnosis. The lecture ends with three key words for using AI wisely: think, check, and create.

8. Other noteworthy information (その他特筆すべき事項):

9. Impressions and comments from the lecture assistant (講義補助者の方から、本プログラムに対する意見・感想等がありましたら、お願いいたします。):