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## 人口高齢化と長期介護需要：AI ロボットは LTC 産業の将来を変革し得るか

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### Population Aging and Long-Term Care Demand: Can AI Robots Transform the Future of the LTC Industry?

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### 研究概要

This research aims to provide empirical insights into the acceptance and design of robotic caregivers in response to Japan's rapidly aging population and the growing demand for long-term care (LTC). By doing so, it seeks to build a foundation for policy discussions regarding the implementation of robotic technologies as a potential complementary solution to the serious shortage of human care workers.

From the perspective of the humanities and social sciences, the project will explore the values and social contexts of elderly individuals through large-scale surveys and analysis. It is expected to contribute to a comprehensive understanding of the ethical and social dimensions of technology acceptance and to help reimagine person-centered care in an aging society. Given that robotic caregiving is also drawing increasing international attention, Japan has the opportunity to position itself as a global leader in this field. The outcomes of this research are likely to serve as a valuable reference for other countries facing similar demographic challenges. In fact, we have established collaborations with research teams in Canada and Taiwan, who will implement parallel studies in their respective contexts following the research implementation in Japan, to facilitate cross-national analysis.

On the technical side, the project is deeply connected with such as sensor technology, artificial intelligence, natural language processing, and human-robot interaction design. By examining how these technologies can be meaningfully applied to real-world societal challenges from a social science perspective, this research will foster interdisciplinary collaboration and strengthen the integration of natural sciences and the humanities.