GEC20-2020-000429
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Abstract for an Invited Paper
for the GEC20 Meeting of
the American Physical Society

**Artificial Intelligence & Machine Learning in Plasma Science and Beyond; Introduction**[1]

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Artificial intelligence (AI) and machine learning (ML) can play important roles in plasma science and its application to a wide range of technologies in various ways. For example, they can be used to extract useful information from a large amount of data produced in experiments and numerical simulations. As the technologies for plasma diagnostics, supercomputing, and data management continue to advance and their costs continue to decrease, data produced in this field is expected to grow exponentially and must be analyzed nearly automatically. For physical phenomena that are too complex to be understood by deduction from the first principles, AI and ML may help one to find correlation or even causation among seemingly unrelated physical quantities or physical events, inferring possible underlying physical mechanisms or even phenomenological predictive models. In this Workshop, speakers specializing in different branches of plasma science and technologies will present their latest research work on the utilization of data in their own specialties. The Workshop is intended to provide an exemplary insight into this exciting development of new means of analyses in plasma science and technologies.

[1]JSPS Grant-in-Aid for Challenging Exploratory Research (18K18753)