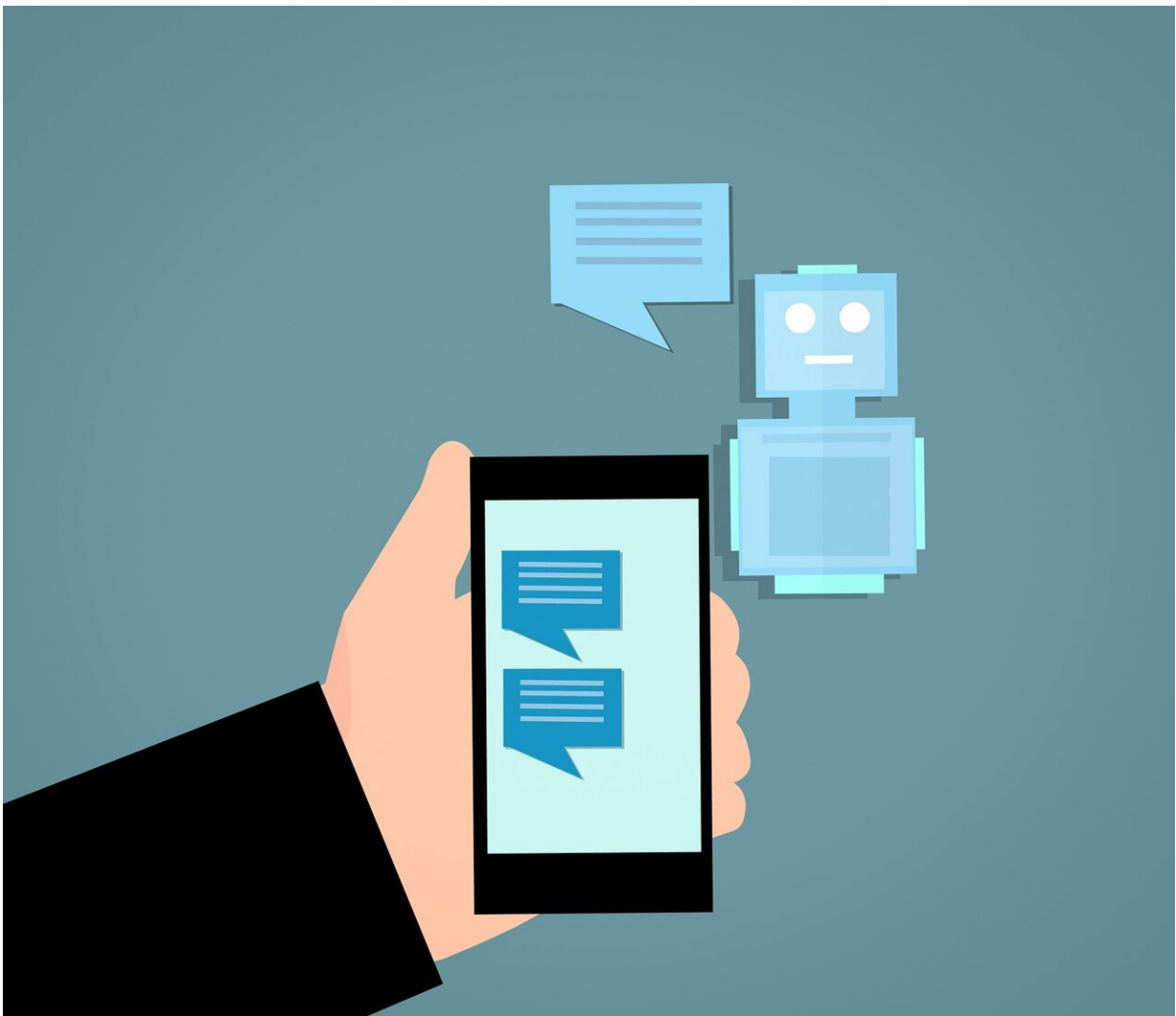


Study examines AI chatbots in public organizations

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From providing fast, 24-hour service, multilingual support and reducing staff workloads, the benefits of artificial intelligence (AI) chatbots are numerous. The technology also holds the potential to improve services across industries, including health care, sales and government. Still, many questions about chatbots remain, particularly when it comes to adoption and implementation within the public sector.

Researchers from the University at Albany's Center for Technology in Government (CTG UAlbany) and University College London (UCL)'s School of Public Policy are examining the use of chatbots by governments, and what factors have led to their successful deployment or failure.

In their article, "The Adoption and Implementation of Artificial Intelligence Chatbots in Public Organizations: Evidence from U.S. State Governments" [published](#) in *The American Review of Public Administration*, authors Tzuhao Chen, Mila Gascó-Hernandez and Marc Esteve analyze 22 state agencies across the United States that use chatbots.

When reviewing the literature, the researchers found that little empirical evidence had been produced to examine the deployment of chatbots in government contexts. Additionally, existing research does not distinguish clearly between the drivers of [adoption](#) and the determinants of implementation success. Third, most current research does not use a multidimensional perspective to understand the use of AI in government organizations.

"Our study addresses these gaps by exploring the following question: What determinants facilitate or impede the adoption and implementation of chatbots in the [public sector](#)?" said Chen, a Ph.D. candidate of Public Administration & Policy at the Rockefeller College of Public Affairs and Policy.



UAlbany PhD student Tzuhao Chen. Credit: University at Albany

Their analysis showed that currently chatbots in state agencies are predominantly used for service information provisioning, which means

that chatbots are used to provide information about public services and do not require users to provide personal information. In the future, such services are likely to be extended to provide targeted assistance and service negotiation, supported by user authentication, meaning that the chatbot actively engages with the user to negotiate and match a user's individual circumstances to the services available.

Regarding the drivers for chatbot adoption, Gascó-Hernandez, the research director CTG UAlbany, and an associate professor in the Department of Public Administration & Policy at the Rockefeller College of Public Affairs and Policy, said, "our analysis finds that ease of use and relative advantage of chatbots, leadership and innovative culture, external shocks, such as the COVID-19 pandemic, and individual past experiences are what mainly drives the adoption of chatbots in state agencies."

The study showed that different types of determinants impact the implementation process, including:

- Knowledge-base creation and maintenance
- Technology skills and system crashes
- Human and financial resources
- Cross-agency interaction and communication
- Confidentiality and safety rules and regulations
- Citizens' expectations
- The COVID-19 crisis

"These findings provide important practical implications that may guide public organizations' future investment in these types of initiatives," said Esteve, professor of public management at the UCL School of Public Policy.

The study emphasizes the critical need to differentiate between the

adoption and implementation of technology-driven innovations. It also illustrates the benefits of applying a multidimensional approach for a comprehensive examination of technology use in public organizations.

The authors also suggest that future research should delve into the interplay between various determinants influencing both adoption and implementation processes, the roles of key stakeholders, such as IT vendors, and the effect of [chatbot](#) use on public organizations and citizens.

More information: Tzuhao Chen et al, The Adoption and Implementation of Artificial Intelligence Chatbots in Public Organizations: Evidence from U.S. State Governments, *The American Review of Public Administration* (2023). [DOI: 10.1177/02750740231200522](#)

Provided by University at Albany

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