

Charter and Mission Statement for the Establishment of a Geospatial Artificial Intelligence (GeoAI)¹ Committee for the NYS GIS Association

Background

Artificial Intelligence (AI) has been acclaimed as a “new capability” that will revolutionize our economy, our society, and our lives. However, the development of innovative tools to enhance human intelligence are as old as cave drawings, manual calculating machines, the chronometer, and just about every kind of digital technology-based tool over the past seventy-five years. What is new about the current advances in artificial intelligence is the confluence of new capabilities that promise significant leaps ahead in power and usefulness including: the ability to use location identifiers to search the internet for needed datasets; answer critical questions by rapidly drawing from vast amounts of written and digital records; integrate spatial data with advanced computational intelligence to support complex decision making; and support unique and simultaneous “conversations” with many people during emergency operations.²

Rationale

The NYS GIS Association recognizes that GeoAI in addition to addressing existing compilations of spatially enabled data, becomes even more powerful when combined with earth observation (EO) data from sensors placed on **moving platforms** including satellites, aircraft, and terrestrial vehicles; **fixed platforms** such as infrastructure features at levels on, above and below the earth’s surface, inside buildings, within utility networks, and on streets and sidewalks; and **carried by people**, such as those embedded within, or connected to smartphones. When geo-enabled data is identified by robust metadata, adheres to standards, and is made easily accessible via the internet; it can be rapidly searched by “GeoAI Agents”, discovered, integrated, and analyzed in any combination needed to solve problems and support operations. Advanced computer chips, vast server-farms, and high-speed communications technologies, make it possible to provide these geo-capabilities to anyone who needs them with great rapidity.

¹ An argument can be made that the “A” in GeoAI, should not stand for Artificial but for Advanced Intelligence. This is because geospatial intelligence always strives for the greatest accuracy and timeliness possible, mirroring actual conditions in the environment. “Artificial” Intelligence, suggests a fictional or false alternative to reality.

² GeoAI holds enormous promise because geospatial systems have for decades brought together multiple data sets to model and predict operational and natural processes. Each of these existing models can potentially be turned into GeoAI agents, accelerating GeoAI development and use.

Mission

The NYS GIS Association recognizes that these new capabilities have the potential to vastly improve human life. They are expected to be particularly useful for applications that require the management of multiple activities across large areas such as entire counties and cities, states, and nations; involve thousands or millions of individual actors; demand complex analysis and workflow support; and need real time data refreshment and recalculation to keep intelligence current. Areas where GeoAI is seen as a game changer include: disaster preparedness and response; supply chain management; use of automated vehicles; property assessment and taxation; epidemiology and pandemic response; public safety; and national defense. Consequently, the NYS GIS Association intends to play a key role in identifying and implementing GeoAI capabilities so that they provide the highest possible level of benefits to our State.

Therefore, the NYS GIS Association hereby establishes a Geospatial Artificial/Advanced Intelligence (GeoAI) Committee whose purposes will be:

- **Technology Awareness:** Identify innovative GeoAI tools, agents, and capabilities and bring them to the attention of Association members.
- **Research and Innovation:** Guide GeoAI research and development efforts to address New York State private and public needs.
- **Education and Outreach:** Inform New York State and its local governments about educational practices that will enhance the public's ability to use GeoAI for their own benefit: on the job, at home, and in the community.
- **Economic Development:** Foster the development of GeoAI oriented private sector companies in New York State.
- **Ethics and Governance:** Explore ways of minimizing abuses and inaccuracies of GeoAI, while maximizing effectiveness and public trust.
- **Data Standards and Infrastructure:** Support Enterprise GIS, robust metadata, and geospatial data standards, to ensure high quality, interoperable datasets for use with GeoAI tools and applications.
- **Promote Collaboration:** Work with other governments and organizations to develop GeoAI based solutions of benefit to New York State.