

SavantX for Nuclear Power Stations

Redefining how Nuclear Power Operators increase operational safety and efficiency with A.I.-powered search and discovery

If you are a nuclear power station operator, you will need an Artificial Intelligence (A.I.) based search capability for all your station's data to help Deliver on the Nuclear Promise. The SavantX Platform is the most advanced search and discovery capability specifically built for the Nuclear Power Industry.

Getting to “This is easy to use”

Tools that are hard to use will sit idle. Easy to use but powerful consumer apps enjoy wide acceptance and set the user experience bar for the enterprise. Compounding this emerging reality is the new guard of nuclear operators don't suffer well clunky legacy systems that fail to deliver.

Regulatory Compliance Induced Complexity

Nuclear power generation is straightforward in concept, but complex in execution due to being mired in level-upon-level of compliance induced complexity. Nothing is simple and the sheer volume, variety and velocity of unstructured data are too staggering for humans alone to process. The answer for years has been to increase headcounts and arm them with structured database tools hoping not to fall too far behind.

Use Cases for SavantX at Nuclear Power Stations:

Single Point of Search & Discovery

Simple is good. And the more powerful the technology, the easier it is for the user.

- Corrective Action Programs (CAP)
- Engineering Fix it Now (EFIN)
- Maintenance
- Performance Improvement
- Regulatory Compliance
- Parts Obsolescence & others

Personnel across these station functions all share the need to find data at the unstructured level quickly - and to do so with a simple query that returns A.I. graded and ranked results that are easily navigated. This is important since often the real nuggets are in the text comments. A.I. is also needed to determine similarity in descriptive text passages so the best results are returned regardless of the language used over time.

The discovery feature opens avenues of exploration by suggesting interesting relationships detected by SavantX's A.I. Thus, emerging issues are more likely to be detected early.

Senior Leadership Visibility Across All Station Operations

Data-driven decision making is streamlined when senior leadership has full access to all data on demand – on their mobile device. No filters or delays in analysis results in increased operational safety and efficiency.

Knowledge Transfer

Subject matter experts are retiring and with them valuable operational knowledge. The silver lining to regulatory compliance is that the data does exist deeply encoded in documents, images and entries that are retrievable with A.I.

Features & Benefits of The SavantX Platform for Nuclear Power Stations:**Autonomous Data Ingestion / Processing**

The platform continuously ingests new data including OCRing without a human-in-the-loop. The best results are always available because the latest data is included in the corpus and the A.I. is immune from 'data drift.'

One Data Store / All Document Types

Station data flows into a unified data store that provides a level of disaster recovery while making all data available for A.I. inspection. Users interact by using natural language queries with both autocomplete and autosuggest, making the experience effortless and efficient.

Discover & Analyze / Trend & Predict

SavantX dynamically categorizes and ranks all relevant documents down to the passage level with intelligent highlighting of key information, relationships, patterns and insights from unstructured data. Results are easily charted to see trends that can drive a streamlining approach to operations.

Perfect Recall at Speed

SavantX's perfect recall across all data types assures all relevant data is returned to the user. Results are returned within a few minutes and a "Get All" feature returns all documents on command if desired for purposes such as legal due diligence.

SavantX A.I. Technology:

An early version of SavantX A.I. was deployed at the Defense Intelligence Agency for several years. More recently and using data from an operating nuclear power station, the SavantX A.I. was nurtured and aggressively optimized based on station operators and engineers needing to solve real problems rapidly.

Active Learning - SavantX's A.I. achieved a technical milestone by requiring no training by humans or data. Instead, its A.I. is always 'thinking' about the data. This is important because the system keeps getting smarter and makes deployments fast. And as new data streams in over time, the system will not suffer 'data drift' and the expensive need to continually train the system.

Navigation Options – The A.I. returns results and makes them easy to navigate. The A.I. Navigator reveals hidden relationships that are impossible to understand from a list and the Active A.I. filtering is easily understood and commanded by users.