PixStor Search with Machine Box
Machine Learning Asset Search
Solution Brief

Rapidly Locate Valuable Data
Organizations are generating exponentially increasing amounts of data. Locating specific data through manual techniques is becoming increasingly problematic, to the point where valuable data is effectively lost forever. PixStor Search provides fast indexing and search capabilities across massive data sets. It is designed to handle hundreds of millions of files, automatically capturing custom or standard metadata about those files, and allowing easy and meaningful searches across the entire PixStor Global Namespace.

Exploit Machine Learning and Artificial Intelligence to Analyze Assets
To date, the missing link for asset search was terse or non-existent metadata on which to search. Enter Machine Box, a developer of state of the art machine learning technology inside a Docker container which can run, deploy and scale on simple on-premise hardware. Machine Box integrates with PixStor Search to automate metadata extraction using machine learning and artificial intelligence, allowing users to perform fast, easy content searches. PixStor Search with Machine Box creates an instant 'AI' searchable asset library. PixStor Search with Machine Box tags each object providing for automatic analysis and monetization of millions of visual assets.
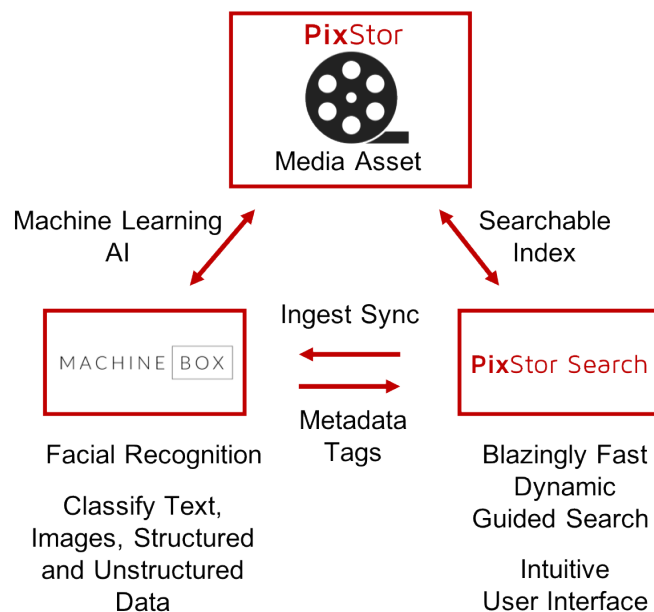
Machine Box and PixStor Search

Shorten Production Times and Lower Costs with Machine Learning
PixStor Search with Machine Box automatically generates tags that describe the contents of an asset. That tag can be an actor or other scene components including, location, weather and product placements. An organization can quickly identify relevant existing assets helpful for producing a sequel for example. PixStor Search and Machine Box can process multiple types of data with a high level of accuracy.

pixitmedia   MACHINE BOX

Monetize Dormant Assets
Easily find and monetize archived assets for new projects and distribution

Lightning Fast Search with No File System Walking
Utilizes world's fastest file system processing, directly accessing the PixStor policy engine with advanced big data techniques

Find Valuable Data Based on Business Defined Metadata
Search for codecs, resolutions, project, producer, director, etc. Quickly locate and move data needed for a project from archive to production storage, know what data you have and make sure nothing gets lost

Browser Interface
Users can search data in the PixStor Global Namespace via an easy to use Web UI. PixStor Search's Dynamic Guided Search provides the fastest method of locating the required search result

Supports Non-standard File Types Through an Extensible Plug-in System
Users can extend PixStor Search to handle in-house or specific file types via a rich Python API providing custom metadata and proxy handling

REST API
Extract and export deep metadata into MAMs, 3rd party workflows and applications through a simple, intuitive API; external applications or automations can query PixStor Search using the standard REST API to provide rapid access to file and metadata information

Immediate and Scheduled Ingest
PixStor Search provides mechanism to scan smaller files immediately or to process larger files asynchronously via deferred scheduling or 3rd party operations (i.e. transcoding)

Fully Scalable and Fault Tolerant
PixStor Search's architecture is fully software defined and can be scaled-out for additional performance or levels of fault-tolerance

Authentication
PixStor Search is OAuth2.0 and SSL compliant

Supported Platforms
PixStor 4.0 and above

Machine Box Brings Fast, Easy and Accurate Machine Learning to PixStor Search
With Machine Box, PixStor Search harvests metadata directly from images, videos, sequences and documents, reducing the need for human intervention when curating data, significantly reducing costs. Machine Box auto-tagging saves huge amounts of time and money. PixStor Search transcodes data into preview proxies for quick browsing and result validation. PixStor Search provides a user friendly interface for interactively searching across these data sets. PixStor Search's Dynamic Guided Search feature aids users to locate the data using the most rapid method of determination possible. Searches can be refined via the easy to use interface, allowing users to drill down to the exact search terms they need, browsing through the data as they go, to help guide the search terms. Shown below are results for the search term "night" in a sample dataset.
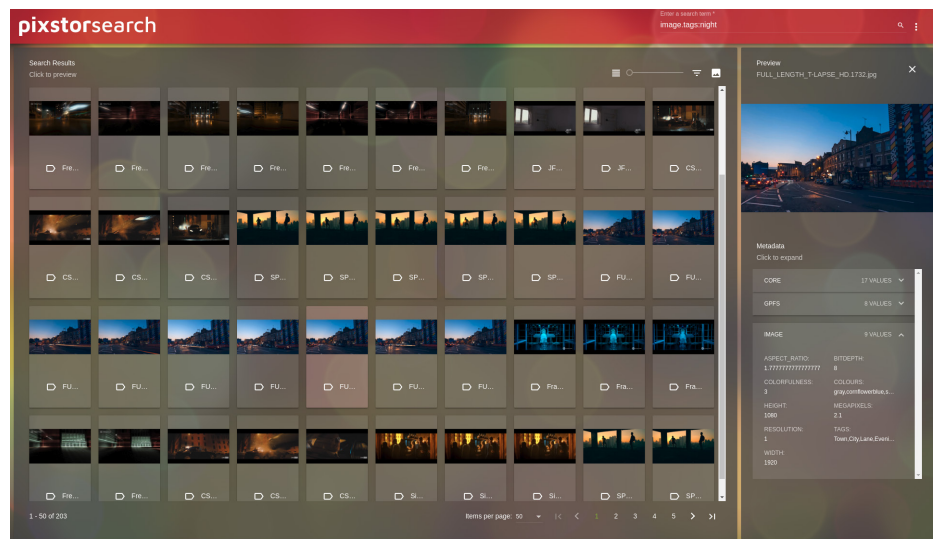
PixStor Search Powerful, Easy Search Interface

Easily Identify All Assets Across a Filesystem
Searching for needed assets is laborious and error prone. PixStor Search with Machine Box makes search smarter by allowing users to find images based on their content. PixStor Search and Machine Box applies facial recognition, similarity, context and textual search to assets to the reduce search complexity and decrease the chance of missing important data.

PixStor and Machine Box Integration
PixStor and PixStor Search pre-processes files and coordinates with Machine Box on new data ingest, so efficient machine learning and analysis can begin. PixStor Search provides highly efficient file recognition ensuring assets are processed by Machine Box's Machine Learning at the point of creation or modification of an asset.

Runs On-Prem, on Simple Hardware
No need for expensive GPUs or cloud-scale infrastructure with PixStor Search and Machine Box, both can run offline behind a secure firewall on simply configured (no GPU needed) hardware. No data needs to travel to the cloud for computation but can do so quickly and temporarily on-demand for burst-scale via Kubernetes/ AWS to accommodate high scale data processing requirements. Cloud bursting could also be done on a private cloud, so highly scalable all on-prem processing is still achievable for security compliance.