

# AI Capabilities Overview

***MVYL•Associates***

Part of the Movyl Group — Cognitive Technologies for Business

- [www.movyltech.net](http://www.movyltech.net)
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Mono Platform Introduction

# Introduction to the *Mono* services

The Movyl Group has developed an extensive set of proprietary technical tools and capabilities that include tools and *microservices* that can be used to easily and quickly create AI pipelines and custom solutions by assembling and connecting different capabilities with minimal custom development. This extensive toolset is our *Mono AI Platform*. Here are some details of its capabilities.

## Main features of the *Mono Platform*

### Understanding



Our platform included cognitive systems that can understand imagery, language and other unstructured data in ways close to what humans do.

### Reasoning



Our platform's components can reason, grasp underlying concepts, form hypotheses, and extract information and ideas.

### Learning



As new data and information is acquired, our platform develops and sharpens expertise, so they continue to learn.

### Interacting



With its built-in ability to rely on images, text, and sound, our cognitive systems are able to interact with humans in a natural way.



# Capabilities overview

Our proprietary *Mono Platform* includes cognitive *microservices* that can be used to build custom cognitive applications, products and systems. Here is a list of the current capabilities the platform exposes.

Capabilities Overview

## CURRENT TOOLSET

- |                                 |                                   |
|---------------------------------|-----------------------------------|
| Prediction                      | Profanity Detection               |
| Classification                  | Vision Recognition                |
| Natural Language Processing     | Language Detection                |
| Natural Language Understanding  | Text Extraction                   |
| Natural Language Classification | Visual Recognition                |
| Conversation Support            | Data Insights                     |
| Language Translation            | News Discovery and Classification |
| Personality Insights            | Semantic Search                   |
| Tone Analyzer                   | Social Listening                  |
| Entity Extraction               | Social Account Validation         |
| Sentiment Analysis              | Social Media Insights             |
| Emotion Analysis                | Social Monitoring                 |
| Keyword Extraction              | Similarity Search                 |
| Concept Tagging                 | Semantic Search **                |
| Taxonomy Classification         | Recommendation Systems ***        |
| Media Metadata Extraction *     | Speech to Text ***                |
| Web Metadata Extraction         | Text to Speech ***                |

\* Smart information extraction (author, mentions, images, dates, etc.)

\*\* Text and images

\*\*\* Currently in development



# Process information from multiple formats

Our data insights *services* can process information from a broad range of data formats, from structured to completely unstructured.

Capabilities Overview

## STRUCTURED DATA

- Relational databases
- DBPedia
- Common Crawl
- Databanks \*
- Spreadsheets
- Word processing files
- Data files
- RSS feeds
- Web logs
- Multimedia
- Social Data
- Content management
- Data warehouse
- Instant messaging
- XML documents
- Web pages
- Email
- Taxonomies, Ontologies
- Wikis
- Data lakes
- Voice recognition
- Sensors
- Internet metadata

## UNSTRUCTURED DATA

\* Image Banks, World Data Bank, US Census, Data.gov, CIA World Factbook, etc.

# Some common applications

Capabilities Overview





Application details

## Case study details...

### Common areas of application

In the following pages we detail some common areas of applications that take advantage of the micro services included in the Mono platform.

There are of course many more applications that can benefit from the introductions of AI methodologies and we are happy to discuss any specific projects you might have in mind.



# Listen & Monitor

## Listen & monitor

Use advanced natural language and social graph techniques to gain insights into social conversations and trends, social entities (brands, individuals) and their relationships with one another, and social influence.

### Scale.

Tackle big, diverse data sets, at a scale. Use advanced techniques in natural language processing and machine learning to identify patterns in unstructured text, on large collections of data in real time.

### Automation.

Go beyond insights with ML, improve result over time and match your favorite topics to trends and anomalies. ML can automatically deliver information as it happens, improving over time, as your specific datasets become more robust.

### Insights.

Separate signal from noise with AI and ML. Use their advanced algorithms to interpret textual data and surface actionable elements.

### Image analysis.

Use visual analysis processes to go beyond logo recognition, to identify objects, scenes, facial expressions, and actions. Tackle the increasingly important role played by image-first social networks, and the prevalence of images and video in online conversations.



# Discovery

## Discovery

Cognitive search and content analytics engine to applications to identify patterns, trends and actionable insights that drive better decision-making. Securely unify structured and unstructured data with pre-enriched content, and use a simplified query language to eliminate the need for manual filtering of results.

### Results

Automated ingestion and integrated natural language processing in the cloud removes the complexity from dealing with natural language content.

### Domain intelligence

The integration of a custom text corpus will teach our discovery module to apply specific knowledge of unique entities and relations in a given industry or organization by simply using and integrating a custom model.

### AI ready for business

Uncover deep connections throughout your data by using advanced AI functions out of the box, such as natural language queries, passage retrieval, relevancy training, relationship graphs and anomaly detection.





# Conversation

## Conversation Agents

Build conversational interfaces into any application, device, or channel.

Create a conversational assistant tailored to your brand, and deliver personalized, natural experiences across multiple apps and devices. Get started in minutes with an out-of-the-box virtual assistant solution accelerator, now in preview.

### Engage your audience

Your users talk in many places, your bot should too. Our bot services can be integrated across multiple channels to increase interactions and reach more customers using your website or app to email, GroupMe, Facebook Messenger, Kik, Skype, Slack, Telegram, text/SMS, Twilio, and more.

### Integrations

Build, connect, deploy, and manage intelligent bots to interact naturally with your users on websites, apps, Slack, Facebook Messenger, and more.



# Visual analysis

## Visual Analysis

Find meaning in visual content! Analyze images for scenes, objects, faces, and other content. Choose a default model off the shelf, or create your own custom classifier. Develop smart applications that analyze the visual content of images or video frames to understand what is happening in a scene.

### General Model

Generate keywords that describe the image. Use your own images, or extract relevant image URLs from publicly accessible webpages for analysis.

### Food Model

Utilize a specialized vocabulary of over 2,000 foods to identify meals, food items, and dishes with enhanced accuracy.

### Custom Models

Create custom, unique visual classifiers. Use the service to recognize custom visual concepts that are not available with general model.

### Brand Safety Model

Assess whether an image contains objectionable or adult content that may be unsuitable for general audiences.

### Face Model

Detect human faces in the image. This service also provides a general indication of age range and gender of faces.

### Many more!



# Personality Insights

## Personality Insights

Personality Insights uses analysis of textual and social media data to identify psychological traits of online profiles. These are critical in determining purchase decisions, intent and behavioral traits, and can be used to to improve conversion rates.

### Flexibility

Gain insight into how people think, act, and feel. Apply linguistic analysis and personality theory to derive attributes from a person's unstructured text.

Use data from any social media, enterprise data, or digital communications data.

### Features

Extract psychographic traits from online profiles including:

- Personality
- Satisfaction with life
- Intelligence
- Age
- Gender
- Education
- Interests
- Political views
- Religion
- Relationship status

Interpretations

- Leadership potential
- Jungian personality type



# Sentiment & Tone

## Sentiment & Tone Analyzer

Use advanced NLP to analyze text and extract metadata from content such as concepts, entities, keywords, categories, sentiment, emotion, relations, and semantic roles. Apply custom models to identify industry/domain specific entities and relations in unstructured text with natural language understanding (NLU).

### Powerful Insights

Analyze semantic features of text input, including categories, concepts, emotion, entities, keywords, metadata, relations, semantic roles, and sentiment.

### Domain Customization

Extend Natural Language Understanding with custom models that can identify custom entities and relations unique to a specific domain.

### Numerous Applications

Apply to various use cases, including content recommendation, advertising optimization, audience segmentation, voice-of-customer analysis, data mining, and more.



# Prediction

## Prediction & Forecasting

Use our AI and deep learning capabilities to forecast sales, pricing, demand, growth and any other business parameters your organization might need, beyond human predictive abilities, particularly with ambiguous, large, and incomplete datasets.

### Scale

Use AI predictive capabilities to go beyond human abilities to detect patterns and trends, and connect imperfect data to derive insight that could otherwise go unnoticed.

### Limited Data, Micro-data

Start working with limited data and expand your knowledge base while benefitting from early results. Use predictive capabilities to forecast micro-trends in environments where human abilities are not able to cope, from stock market to manufacturing to the environment.

### Extend Knowledge

Achieve increasingly accurate levels of prediction with modern deep learning techniques that improve overtime and become more and more precise in forecasting data and extracting minute events from textual, visual, and numerical data.

### Numerous Applications

Apply to various user applications, including audience attribution, data security, fault detection, financial trading, healthcare, fraud detection and many more.



Conclusions

# Final thoughts

## Common areas of application

This overview touches on just a few aspects of the *Mono* platform's capabilities.

There are of course many more applications that can benefit from the introductions of AI methodologies and we are happy to discuss any specific projects you might have in mind, from custom studies and reports for political campaigns, to consumer studies, to industrial applications.

Don't hesitate to get in touch to explore all that AI and the Mono platform can offer.

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# Thanks

Get in touch  
to learn more!