Obsydian

A Vai Technologies Product

Obsydian

Overview

Obsydian is an Artificial Intelligence (AI) platform for business-driven language understanding workflows. Obsydian provides a principled, centralized, human-in-the-loop foundation for organizations to build natural language understanding (NLU) competencies and natural language processing (NLP) workflows.

Obsydian is based on a single principle — **workflows over models**. Most organizations with AI or NLP teams suffer from a common roadblock — mismatched workflows lead to misaligned objectives and disjoint deliverables, never truly adding value to use cases.

Obsydian adds value through five key platform components:

Discover — Inform human decision-makers with data-driven, thematic insight

Annotate — Collect human knowledge, data, and decisions in a centralized location

Automate — Build automatically tuned predictive models and learn to reproduce human decisions to tag text

Extract — Learn to extract, identify, and organize structured information from unstructured text

Deploy — Launch models and deliver to real application use-cases

Obsydian provides a common platform to take a data product or insight workflow from data source to value-add in as little time as possible. Using Automated Machine Learning (Auto-ML), it is able to automate significant components of any AI workflow, ensuring that organizations can focus on what truly matters — human insight and expert knowledge — all while saving time and improving efficiency. By prioritizing human-in-the-loop workflows with an annotation and data collection module, Obsydian offers decreased iteration time and a tighter development cycle for both application-driven and insight-driven AI use-cases.

Platform Use Cases

Obsydian can power use cases in a wide variety of domains such as content organization, institutional knowledge consolidation, recommendation and personalization, conversational AI, call center voice and topic analysis, support ticket routing, and digital listening across any medium.

Understanding customer behavior from feedback and reviews

Any user-facing product must leverage all sources of data, both structured and unstructured, to ensure that the customer is satisfied and will retain a positive impression of their experiences. By understanding the unstructured data that a user produces during their lifecycle as a customer, Obsydian can help with retargeting of customers who are dissatisfied or will soon be dissatisfied, as well as provide targeted insight into why a customer may feel positively or negatively about a particular product or service. In addition, Obsydian can learn to identify repeat customers and can learn to pick up on linguistic cues that may indicate shifting sentiment. By prioritizing data collection and a human-in-the-loop workflow with rapid iteration, Obsydian can help organizations understand and predict sentiment and behavior.

Conversational Agents

Whether with internal users or external customers, efficient conversational experiences are of critical importance to any business. Off-the-shelf solutions rarely adapt to high-value use cases or domain-specific considerations, and often forget that ROI is achieved through prioritizing principled data collection and a human-in-the-loop. Obsydian Annotation presents users with an easy-to-use interface for extracting key structured segments of dialog, such as desired actions, products, time, and location, among others. Powered by Active Learning, Obsydian will suggest human touch-points that maximize organizational return-on-effort, as well as providing best-current-guess annotations to speed up iteration time. Obsydian has increased annotation efficiency by as much as 500%. Obsydian Extract provides direct workflow integration for consolidating annotations and training AI models that leverage this information to turn new pieces of dialog into structured data. After being deployed with Obsydian Deploy, application developers can directly power a conversational agent or increase operator efficiency in a support setting.

Helpdesk and support

Helpdesk, ticket resolution, and customer support are of extreme importance for both internal-facing and external-facing products. Being able to understand where users face difficulties can provide businesses with an advantage over competitors. Obsydian Discover can provide high level overviews of what users discuss and ask questions about, allowing proactive operators to build internal knowledge around future pain-points. In addition, by once again prioritizing a human-in-loop data-first workflow, Obsydian can power root-cause analysis and allow more efficient routing of support tickets to subject matter experts as well as more accurately triage and rank issues for resolution. Underlying all of this functionality is a suite of tools to allow for principled, interpretable AI models which can be easily iterated upon to deliver value.

Obsydian Modules

Obsydian provides pluggable modules which can allow for specific integrations and use cases involving media related to language.

- **Twitter Module** — analyze, stream, and apply AI models to tweets in real time.
- **Custom Modules** — we provide custom modules for specific data sources in order to ensure interoperability with your organization.

The Obsydian Workflow

Obsydian standardizes five key areas of successfully obtaining business value from AI in language understanding. This is done through a tight coupling of the five major components of our platform, outlined below.

- **Obsydian Discover** allows analysts, data scientists, and domain experts to obtain high level semantic and thematic insights into textual data through the use of topical modeling and interactive, graphical views into topical relationships. Obsydian Discover automates this discovery process though automatic machine

learning, allowing users to focus on understanding and obtaining high level insights rather than tuning models.

- **Obsydian Annotate** provides a best-practices data lake and annotation service to ensure that making data quality a first-class citizen is tightly integrated and aligned with AI efforts. Whether the goal is insight and understanding or a data-driven product, ensuring a principled manner to collect human insight and annotations is crucial. The Obsydian Annotate UI provides an easy manner for experts to annotate data efficiently - behind the scenes, active learning algorithms decide what data provides the highest margin for annotation

- **Obsydian Automate** allows AI models for document understanding and tagging to be trained directly from an easy-to-use dashboard, ensuring that the human input obtained with annotation can be directly incorporated into predictive models. Using architecture search, we automate the model building process, meaning that we shift organizational emphasis away from tuning AI algorithms and towards data and human interpretability. Obsydian places a strong emphasis on interpretability through this model building process - we always want to make sure that subject matter experts agree with the decisions that AI algorithms make.

- **Obsydian Extract** powers an organization's ability to train AI models that convert unstructured text into structured data. Using state-of-the-art deep learning, Obsydian Extract works in any language, and removes the need for organizations to function at the level of model training and tuning - a tight coupling between annotation and model building means that operators use data to define behavior, which Obsydian Extract can leverage to build powerful models to power use cases such as conversational interfaces, legal document entity extraction, résumé understanding, and more.

- **Obsydian Deploy** ensures that the loop from algorithms to real application use cases is closed. Many organizations cannot capitalize on the transformative value of AI due to the difficulties involved in providing a principled manner to deploy and scale AI algorithms to application and analytical use-cases. Obsydian handles deployment within the platform, meaning that a data product can be taken from data collection to deployment in a matter of hours, not months.

About Vai

Vai builds AI-powered software products to solve business challenges. Our focus is automating business processes with natural language understanding, and prioritizing an agile, principled approach to developing natural language capabilities within companies. With our flagship product Obsydian, companies are able to directly improve processes with AI powered natural language understanding. Vai was founded by engineers and researchers from Google and Stanford with the goal of solving critical-path problems with cutting edge AI.

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