

# Powering your team through intelligent experiences with privacy by design

We're excited to leverage machine learning-powered intelligent experiences in our Cloud products, [as introduced](#) in October 2020.

Over the last few years, we've been building the Atlassian Platform that provides a common [cloud infrastructure](#) to create powerful connections across our products, making collaboration faster, more predictable, and secure. Using the Atlassian Platform, we have the ability to aggregate user patterns from over 150,000 customers of our Cloud products to understand how work gets done and how teams interact at scale.

Intelligent experiences are designed to accelerate teamwork by making collaboration easier. We're here to tell you all about how we've designed our solutions with privacy at their core.

Like with all our customer data, we commit to building our machine learning-powered features in line with Atlassian's [Privacy Principles](#) and [Privacy Policy](#). This page is designed to explain how we've lived up to those commitments, and how we've added value to the following intelligent experiences as they exist today, by incorporating privacy by design into:



## Intelligent search

- Personalized search results that can surface the most relevant content for you
- Instant search results based on what you are likely to be looking for
- Intelligent filter controls that can help scope your search to the people you work with and the projects/spaces that you work in



## Predictive collaboration

- Intelligent user mentions that can suggest the most contextually relevant people to bring into the collaboration loop
- Predictive page restrictions that can suggest the people you closely work with to collaborate on a document
- Predictive pull request reviewers that can suggest the appropriate people to review code changes



## Workflow acceleration

- Predictive issue assignment that can suggest the most contextually relevant users to work on an issue
- Intelligent issue categorization and triage that can suggest appropriate field values for common issue fields such as labels, components, and fix versions
- Intelligent issue clustering that can group together similar issues to assist in bulk workflow operations



## About machine learning

Machine learning tools in intelligent experiences are powered by models. Models use computer algorithms to improve features automatically through experience. Here's how this works:

### LEARNING

- a model is “trained” on source data, which involves using algorithms to identify generic patterns based on general user behavior (trained models do not store source data, as their purpose is to learn from it, not rely on it)
- through pattern recognition, the model develops an ability to predict the likelihood of future user behavior
- it translates these predictions into rules to apply in similar future scenarios

### ACTIONING

- The model applies those rules back within your instance of our product
- these are applied across all Cloud products to help unleash the power of teams!

### EXAMPLE

A model identifies that, on average, any given Jira user is most likely to mention people they've worked with recently on an issue. The model extracts this general pattern of behavior among Jira users and applies it by establishing a signal (i.e. “a user previously tagged someone in an issue and is about to tag someone again”) and assigns that a weight (i.e. “it's likely to be the same person as before”). This allows the model to help make teamwork easier for the user (i.e. “let's surface the previously-mentioned person at the top of the @mention pick list”).

## How are models trained, and is my data part of training?

Today, models powering intelligent search, predictive collaboration, and workflow acceleration draw from a few different datasets, including:

DATASET	FEATURE	EXAMPLE DATA
De-identified aggregated usage data	Predictive mentions/fields	<ul style="list-style-type: none"><li>• user-123 mentioned user-456 a total of 6 times in the last 30 days</li><li>• project-123 had 20 issues labelled label-456 in the last 7 days</li></ul>
De-identified one-way vectorized content	Issue clustering	<ul style="list-style-type: none"><li>• issue-123 description text in one-way vectorized format as vector-123 is mathematically near the vector representation for issue-456, indicating they are “similar” issues</li></ul>
De-identified search terms	Intelligent search	<ul style="list-style-type: none"><li>• user-123 searches for “roadmap” and clicks on page-456, algorithm runs multiple different search queries for “roadmap” and optimizes itself so the desired page-456 can appear higher in the search results in the future</li></ul>

## How do intelligent search, predictive collaboration, and workflow acceleration respect data privacy?

One of the best parts of working at Atlassian is getting to use our own tools, and we use them for all types of work. As a public company, we understand the importance of proper care for confidential information. Rest assured that we've thought deeply about how to prevent ML models from unintentionally revealing information about source data they're trained on.

We've set up privacy controls both within your organization (to prevent people within an organization from seeing information they shouldn't), and beyond (to prevent anything from getting outside your organization):

- We build experiences that respect the privacy controls in our products - eg. users will not be recommended content they do not have permission to see
- Where we build models that learn patterns from your data (e.g. from search queries that are made by your users on your instance), that data does not leave your group permissions for broader model training - de-identified search query strings are only accessed by automated jobs and are not read by individuals (restricted pages are never used)
- Where we build models that learn trends across customers (e.g. users generally search for things they recently worked on), we only source data from information like de-identified behavioral analytics (e.g. number of likes) and one-way vectorized content, aggregated across Cloud customers



- We use models trained on public datasets (i.e. which do not contain customer data), when possible
- All data is collected, handled, transmitted, and stored in line with our [Privacy Policy](#)

### EXAMPLE 1

We know privacy is important within your company, including Confluence page visibility settings. Intelligent search observes all group permissions settings, including user-level permissions, so Confluence pages marked “private” won’t be surfaced in recommended search results to users in your company without page access.

### EXAMPLE 2

We know you don’t want other companies to receive suggested search results based on your confidential information. Unlike other types of search engines, intelligent search does not aggregate top searches across customers to improve its functionality (it learns about individuals' search preferences), so machine learning models will always observe your group permissions and prevent information bleeding between customers. In other words, if you have a private Confluence space and your team is using it to collaborate on Confluence pages called “New Co acquisition”, other Atlassian customers using Confluence and searching “New Co” won’t see suggested results based on your “New Co acquisition” pages or users' search queries.

## What control do I have over intelligent experiences? Can I switch them off?

This page reflects Atlassian's practices with respect to intelligent search, predictive collaboration, and workflow acceleration as of December 2020.

At this time, intelligent experiences power what we consider to be core functionality of our products, like finding pages and mentioning teammates, and disabling them would severely disrupt their performance. Because of this, and in light of the measures we take to protect your privacy, we don't currently offer an "off switch".

We're confident in our risk minimization strategies, and as machine learning capabilities develop we'll continue to research and apply privacy-enhancing techniques to grow new features. Your input is an essential part of our evolution. Learn more about what's coming next at Atlassian by visiting our [cloud roadmap](#), and share your thoughts on how we can align our plans with your privacy needs by creating feature suggestions (or voting, watching, and commenting on existing suggestions), in Atlassian's [public issue tracker](#).

You can also participate in conversations around intelligent experiences in our [Community group](#).

