Alation

find, understand, and use the right data for better, faster business decisions
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With so much data, so little time, and so many questions, how do you drive your business forward?

**Complexity is the silent killer.**

Today, data is everywhere: in every department, business process, and customer interaction. We’re adding more and more data everyday by developing new programs, integrating new software, and adding new technology. But to use all this data, we have to find it, learn how it was produced, what it means, whether it’s high quality, who knows about it, and how it’s been used in the past.

**Tribal knowledge doesn’t scale.**

Navigating the maze of data is challenging; so we throw massive resources at the problem by hiring more analysts and data scientists, provisioning more hardware and software, and retaining armies of consultants. But these systems and individuals each only hold a portion of the total data knowledge required to reach an accurate insight.
No single system will contain all of the answers.

Historically, we’ve tried to solve this problem by putting all the data in one place. Sometimes, we build data warehouses or data marts and data lakes. Alternatively, we take on massive documentation initiatives. In spite of these efforts, data inevitably ends up disorganized, duplicated, and living in disparate containers such as separate relational databases, Excel, Hadoop environments, and business intelligence tools like Tableau, to name a few.

But a single system can show you where to find any answer.

We founded Alation to make enterprise data accessible, believing that finding and using the right data shouldn’t require heroic feats by PhD data scientists or weeks of effort from an overburdened analyst. Alation acts as a GPS in the world of enterprise data, where the maps are outdated and incomplete, and only a select few know the lay of the land.

Alation: Machine learning to enable human learning.

Using the combination of machine learning and crowdsourcing from experts identified by their usage of tables, Alation centralizes the knowledge on data and ensures it’s always up-to-date. From the largest companies in the world to five-person analyst teams, our customers share one characteristic: they’re driven by data. Alation simplifies enterprise data by centralizing knowledge into a single place, even if the data itself lives in multiple places. Here at Alation, we strive to ensure that anyone can access the data they need.

At your organisation, Alation can

empower people to make better business decisions

enable collaboration so everyone can work smarter together

build people’s trust in technology and one another
What Alation can do

- Data Search & Discovery
- Collaborative Analytics
- Effective Data Governance
Collaborative Analytics
Just-in-time knowledge for your analysts

At your business today...
Your new analysts spend half their time looking for data, your experienced analysts spend half their time helping recent hires, and when senior analysts leave the company, they take lots of data knowledge with them. In a complex data environment, writing a single query can take days. Sometimes an analyst will work on a question for weeks before realizing that someone else had previously produced an answer. Yet often, when two analysts try to answer the same question, the resulting numbers differ, so the decision makers can’t trust either one! Your analysts’ time is valuable: every hour they spend on actual, accurate analysis could yield thousands of dollars for your company. They shouldn’t have to waste so much time just finding the right dataset, learning how to use it, reinventing the wheel, or making avoidable mistakes and then backtracking.

Alation can...
• reduce analyst on-boarding by up to 50%
• increase the productivity of your analysts
• yield faster time-to-insight for your business
• reduce data infrastructure costs
• Analysts: Get your work done, faster.

Analysts: Get your work done, faster.

First, you have to find the right data: Where—among the many databases and file systems in your organization—is the right table (it could be in any one of the many databases and file systems in your organization)? When was it last updated? How is the revenue column calculated? Are people using it? Then, you need to figure out how to use the data: How do you join these two tables? What’s the right definition for retail products and which column should you use? Often, you have to find the expert and wait for them to have the time to answer your questions. And more often than not, you are at the mercy of the expert’s limited time because they have a lot to do.
Find data faster

**Data Search**
Want to find written queries by a trusted teammate using a particular table? Or to find tables on a certain topic? Search by keywords and filter by a variety of facets to radically accelerate your data exploration process.

**Searchable, Comprehensive Data Documentation**
Alation automatically builds a Catalog of useful data documentation, covering all of your data sources. Access relevant information (including experts, lineage, keys and indexes, relevant queries) and documentation on all tables, across your organization’s data sources, in seconds.

**Lists of Top Tables and Queries**
First day on the team? Alation helps you understand which tables and queries to start your learning with. See which tables are most often used using automatically calculated popularity ratings. Find most executed queries using Query Search across your company’s entire SQL code base.
Just-in-time knowledge

**SmartSuggest**
As you write SQL, Alation auto-suggests relevant data objects based on what others have used in similar contexts. Analysts can even search and pick SQL snippets (e.g., filters or join conditions) using keywords. It’s the most helpful tool you’ve ever used for writing SQL.

**Profiles & Data Preview**
Preview a table as you’re writing your query to make sure you’re using the right data. See sample rows, understand the usage patterns, see tips and warnings from your peers. Get the context behind the data you’re about to query. It’s a heads-up display for your data.

**Semantic Search**
Instead of looking up country codes and enumerated types in a bunch of wiki tabs whenever you write a query, just type in English, and watch as Alation “translates” words into filters and functions (e.g. when you type “China,” Alation can suggest “cntry_cd = 156”). It works like magic and saves lots of time since you’ll avoid research and mistakes.
**Query Sharing & Discovery**
No more emailing CSV files and SQL code. Share queries and results with team members using web links accessible from any machine and any browser. Or discover colleagues’ queries with ease, using Query Search over all the SQL ever written at your company.

**Tagging and Workspaces**
Organize your work by tagging conversations, queries, tables, or query results. For example, you could create a “Traffic” tag to identify useful SQL snippets for the Traffic team.

**Conversations & Articles**
Alation offers wiki and forum functionality specifically designed for sharing knowledge about data. Instead of copying SQL into a page as text, with Alation you can just type ‘@’ to insert a live link to a query—it will be beautifully formatted and will reflect the latest updates. Visitors can then execute it with a click, or branch off their own version. And if you reference a table in a document, a reader can expand it in place to see sample rows, column types, and documentation without switching contexts.

**Discover the Expert**
Have a question about a table or column? Alation examines prior querying behavior to find the expert fast. And when an expert responds to a questions once in Alation, the answer will persist for all users in the future.
Powerful query IDE

Querying Pro Tools
Query across any database in your company with a single, consistent interface. Schedule queries to run as lightweight jobs. Add variables to create template queries. Stream gigabytes of query results. Alation is industrial strength.

R & Python API Extensions
Alation offers APIs to extend your queries and results into your R and Python code. By keeping your SQL and results in Alation, not only can you write SQL faster and with less error, but you can also make your SQL easier to maintain.

Power text editor
Our query tool, Alation Compose, includes features for formatting and error highlighting, script mode, and more, with unified access to all data sources in your company. Query warnings appear to guide you if you’ve written a query that might not be up-to-snuff with your DBAs, and SmartSuggest helps you write accurate queries, quickly.

Query Anywhere! Offline Execution
After pushing ‘Run’ in Alation Compose, you can close the window, quit the browser, shut down the computer, or even spill coffee on the hard drive. No matter what happens, the next time you connect—from any machine—your query results will be waiting for you.

SELECT count (*)
FROM trans
WHERE region =
USA
EUROPE
ASIA
Getting the right answer just takes too long. You shouldn’t have to know every last acronym, abbreviation, and quirk of your data to get last month’s sales report. Your enterprise is flooded with data and documentation surrounding the data, not to mention smart people who can analyze it. But because your data is so complex, it takes too much time to get the right answer or even find the person that could give you the right answer. Sometimes, you get lucky. Sometimes, you wait. Much of the time, you just make assumptions (occasionally resulting in rework) based on the information you have.

Data Search and Discovery
Empower your people with accessible data

At your business today...
Ironically, the more data you collect, the harder it is to find the data you need. Part of the problem is that the data and the information about it is spread across disparate databases, wikis, data dictionaries, metadata tools, glossaries, and systems like Hadoop. Another challenge is that different systems and employees refer to things in different ways. On top of that, it’s hard for anyone to figure out which information is up-to-date, which metrics are miscalculated, and which datasets are trustworthy.

Alation can...
- accelerate time-to-insight
- reduce costly errors and reconciliation
- provide a single point for universal data access
- Find the needle in your data haystack.

Find the needle in your data haystack.
Simple, powerful search

Search in English, not “Database”
Want to find data on Sales, Customer Engagement, Pricing, Churn, Marketing Spend, FTP, ICD-10, CTR (whether it means “center”, “counter”, “click-through-rate,” or something else), or whatever else you can think of? Type away. We’ll find it for you.

Find the data, no matter where it lives
We’ll find the right data whether it lives in Hadoop, MySQL, Oracle, Vertica, Teradata or any of the many databases and file systems that we support. We’ll help you understand the results with technical metadata, usage metadata, and documentation. Your data can be all over the place. You’ll be able to search over everything from one place.

Facets
Want to find tables that take up more than a terabyte which haven’t been queried in the last 6 months? Or tables populated from the transaction_full table which have been queried by Susan (the expert on revenue calculation)? Alation lets you facet on technical, social, and relational properties. Want more facets? Alation is extensible.
Seamlessly collaborate

Find the Expert
Can’t find the data you need? Or, maybe you just don’t understand the data you find. Alation discovers the experts so that you can get to work faster.

When you can’t find the answer, Converse
What if the answer doesn’t exist or you just can’t find it? No worries. Alation Converse allows you ask experts a question. If your question is technical, experts can include live links to datasets and even queries that you can modify and re-run. The entire conversation gets tracked in Alation, and is readily visible to anyone looking at any of the tables or queries mentioned.

Trust your data

Endorsements and Ratings
Alation’s machine learning algorithms leverage statistics on usage and visits to rank every data object in your company. But sometimes machines are not enough, and your data experts—analysts, stewards, IT folks, and data governors—can improve the rankings by rating and annotating data. This way, you can quickly know if a report is putting you on the wrong track.

Contextual Validation
Learn about who has used the data in the past, how they’ve used it, and when the data was last refreshed.
Discovery in context

**Glossary**
Alation lets you easily understand terminology from your enterprise business glossary, and link it to the underlying data and SQL code. Want to know the best practice for calculating churn using the marketing database? Glossary helps you find the required knowledge, fast.

**Automated Data Dictionary**
Alation automatically documents data across all your sources. Access relevant information (including definitions, experts, lineage, keys and indices, relevant queries, etc.) to understand the semantics of your data and how you can use it.

**Extensible Model**
Customize fields in your data dictionary and glossary to suit the needs of your organization.

**Articles**
Find articles with best practices, tips, and examples directly in Alation. You can even see a sample of results, images, linked references to people, data and reports.
Effective Data Governance
Keep up-to-date with your data.
Leave the busy work to the computer.

At your business today…
You have so much data, in so many different places, it’s hard to find stewards to curate and annotate it. You have so many people who both produce and consume data. You’d love to be able to identify which data is important and who’s using it. You wonder how everything will get documented, where to start, and if completed, how it will all stay up-to-date. You also need to know when the data changes and whether people are using data in an appropriate way. Let Alation turbo-charge your data governance initiatives.

Alation can...
• accelerate recruitment of data stewards
• automate stewardship processes
• track and improve the ROI of governance initiatives
• ensure proper data consumption
• Stewards: create correct and comprehensive documentation, fast.

Stewards: create correct and comprehensive documentation, fast.

You have so many terms and tables to document, it’s difficult to know where to start. Or how you’ll ever finish. You’d love to be able to prioritize your work, get more done, and do less busy work. Let Alation help.
All the Basics, but better.

**Business Glossary**
Alation lets you create a business glossary in minutes. You can track terms, assign owners, track relationships and even directly map the glossary to underlying data objects like tables, attributes and reports. If you have an existing glossary, no worries—use Alation to connect your glossary with your other data assets, to make it even more useful to your analytics, business, and technology teams.

**Integrated Data Dictionary**
Alation automatically builds and updates a data dictionary covering all of your data sources, from MySQL to Teradata to Hive. A typical out-of-the-box table page includes sample rows, the schema (including many English titles guessed using machine learning over your documentation), experts (as determined by their querying behavior in the logs), lineage, keys and indexes, and relevant queries. You can then further enhance a page with descriptions, policies, data quality warnings, links to glossary, and more.

**Extensible Model**
Customize fields in your data dictionary and glossary to suit the needs of your organization.

**Articles**
Create articles with best practices, tips, queries, and examples directly in Alation. Alation offers wiki and forum functionalities specifically designed around data. No more pasting best practice SQL code as text into your wiki article only to find it outdated within days. With Alation, you can link to anything and the content will be kept up to date.
Automation and propagation: Let the computer work for you, and make every click count

**Lineage**
Alation parses the logs to automatically generate a map of where the data came from, where it’s going, and how it’s being moved. You can see a visual diagram of inputs and outputs or zoom to see the actual code that’s moving the data around.

**Lexicon**
Using cutting edge techniques in machine learning and natural language processing, Alation can learn to speak your language by reading your organization’s documents. Allie, the Alation “robot,” can deduce that ‘comp’ tends to mean “comparative” in your team, “computer” in someone else’s, and “compensation” for HR. She can then figure out what your funky column names mean, so you don’t have to. But if she makes a mistake or misses a spot, you can view all her guesses about terminology, and can make corrections or additions, which will then take effect throughout the data dictionary.

**SmartSets & Propagation**
Don’t copy-paste until you develop carpal tunnel syndrome. With Alation, you can define a set of objects which share a property (e.g. all schemas ending in ‘_t’ or all tables with more than 10,000 rows) and add annotations to all of them simultaneously. The members of the set update dynamically as the data changes, and when you change the annotations for the set, all the members update at once. Never worry about staleness or completeness.
Make a real impact: 
**Actionable and enforceable policies**

**Warnings and deprecations**
Push users away from stale or broken data and toward the gold standard sets with deprecations, or provide warnings on how to avoid common pitfalls. Flags will appear right at the top of the object’s page in Catalog, so users see the information before they make a mistake.

**Curators and consumers, together**
Data consumers such as business analysts actually use Alation every day to do their work. Most policy documentation in enterprises gets overlooked or forgotten. But with Alation, you have a direct line of communication to your audience.

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**Learn from past behavior:**
**Turn usage into insight**

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Cols</th>
<th>Popularity</th>
</tr>
</thead>
<tbody>
<tr>
<td>trxnx</td>
<td>Transactions</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>user</td>
<td>Users</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>invntr</td>
<td>Inventory</td>
<td>73</td>
<td></td>
</tr>
<tr>
<td>trxnx_lpc</td>
<td>Transactions (1%)</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>click</td>
<td>Clicks</td>
<td>28</td>
<td></td>
</tr>
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<td>country</td>
<td>Countries</td>
<td>18</td>
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</tr>
<tr>
<td>pages</td>
<td>Pages</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>user_lpc</td>
<td>Users (1%)</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>trxnx_h</td>
<td>Transactions (Hot)</td>
<td>37</td>
<td></td>
</tr>
</tbody>
</table>

**Identify the most-qualified stewards**
Governance officers report one of the hardest parts of the job is to find qualified stewards for data objects. Alation surfaces those individuals who’ve written the most queries or documentation on a table already: prime candidates to tap as official stewards.

**Prioritize: match stewardship supply with demand**
In large enterprises, there’s so much data growing so fast that 100% coverage remains elusive. But there’s no need to document data which is never used. At one customer, Alation found that fewer than 10% of tables were queried by two or more people in the last year (over 90% were stale, unused tables, or pet tables used by a single analyst)! Alation sorts tables and schemas by usage, providing a perfect prioritization for stewardship work.
Tracking and Transparency

Completeness Dashboards
Track the status and completeness of items in your data dictionary or business glossary. See which stewards are making the most process, and which domains are lagging and could use more manpower. Understand how much human work is left to do and how much time you’ve saved with Alation’s automation.

Slice and Dice
Filter and facet to get lists of To-Do items by topic, steward, size, or staleness.