Welcome, everyone! Today, I'm excited to introduce our Conversation Data Analyzer (CDA), With CDA, it's your data in your language, enabling data-driven decisions in your business.

**What actually is CDA?**

The Conversation Data Analyzer (CDA) is a sophisticated tool designed to extract and interpret information from natural language conversations. It transforms your data into actionable insights using advanced natural language processing techniques. With CDA, you can effortlessly query and analyze your data in your own language, making data-driven decisions more accessible for everyone in your business.

**Why Do We Need CDA?**

Traditionally, in Delivery, acquiring specific data involved reaching out to Database Administrators (DBAs) by Account Delivery Heads (ADHs) or Programme Managers (PMs), which could take several days. Our CDA simplifies this process, allowing users to obtain insights through natural language without needing to involve DBAs.

Additionally, while ticketing tools like **Cisco, Systrack, Nexthink, and ServiceNow** can generate standalone reports, they don't analyse the data comprehensively. Tools like **Power BI and Qlik** require users to create dashboards each time, adding technical complexity. Our CDA eliminates technical dependencies and empowers non-technical users to gain insights effortlessly.

To utilize CDA, users must perform three important stages, starting with the Data Upload Wizard, which has five steps:

1. **Select Project**: Users can choose to start a new project or continue an existing one. For instance, if you want to combine your analyses, such as month-wise call IVA data For example, April and current month data, you can opt for an existing project.
2. **File Upload**: Here, users can upload multiple data sources, such as incident records from ServiceNow, attendance reports from HR Workday, and call IVA data from ZenDesk. These sources can be integrated with each other. Users can review file stats and validation checks. Each uploaded data undergoes multiple backend checks, including SQL injection checks. The **autofix** feature automatically resolves any issues.Here we manage null values, empty records, remove special characters ,etc. Only after passing these checks is the data uploaded to the project's database.
3. **Natural Language Query**: Users can enter queries in natural language to gain insights from the uploaded data. For example, typing a query will initiate the response generation process. We use the LLaMA 3 8B model quantized with FP16 using the OpenVINO format. After testing several models, we found that OpenVINO-converted LLaMA 3 8B performed best in terms of speed and quality. This model has a tokenization time of 0.34ms and a first token latency of 250ms/token. The user's natural language query is converted into an SQL query, executed by a MySQL server. The generated response is then processed for display, utilizing GPU for enhanced performance. The output is presented in a tabular format, along with the SQL query and schema details.
4. **Data Visualization**: Here we can visualize the data obtained as an response with various graphical representations. Users can visualize data in various forms to gain deeper insights. This feature is especially useful for ADHs and PMs, who can export data directly for high-level business presentations.
5. **Chat Interface**: Our chat interface allows users to interact with the data by asking complex queries. Here, we use the LLaMA 3 GGML model, which analyses all generated responses and provides detailed answers. This process utilizes CPU only and takes a bit more time.

**Conclusion**

Our CDA tool is fully data-encrypted and operates entirely offline on your PC, ensuring your data remains secure. In conclusion, CDA is a significant boon to our business, especially for ADHs and PMs, by reducing effort and time spent on data analysis.

Thank you Everyone!