# Logging Chat Conversations with
# Bot Framework

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# Agenda

- Why Log?

- Intercept Messages

- Code Highlights

# Why Log: Privacy Implications

- Bot Framework does not automatically save conversation

- Capturing conversational details can potentially capture private information

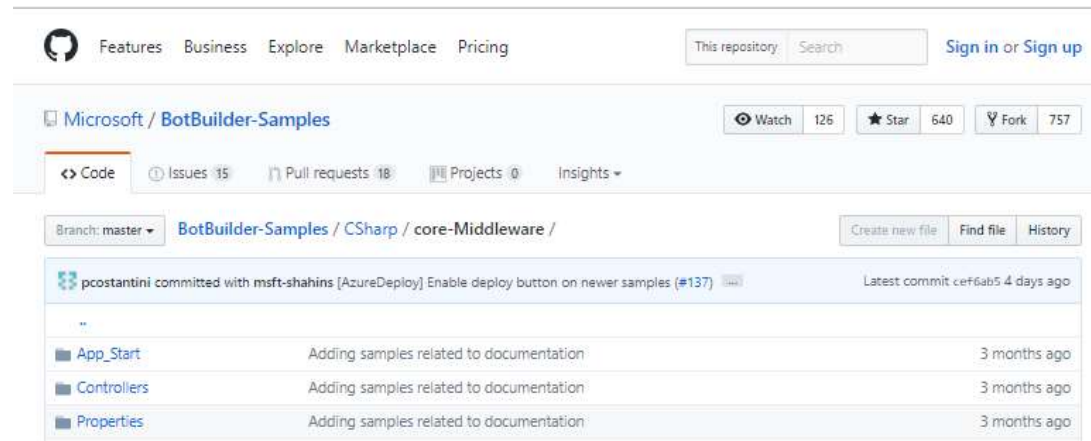- Bots and users may not wish to share with outside parties

# Why Log: Chat History

- Learning to chat

- Question-answering

- Personality for Your Chatbot

- Retrieval-based models

- Lookup (with various degrees of sophistication) from a predefined set of answers

# Intercept Messages

- Middleware functionality enables your bot to intercept all messages that are exchanged between user and bot

- For each message that is intercepted
    - Save the message to data store
    - Create a conversation log

https://github.com/Microsoft/BotBuilder-Samples/tree/master/CSharp/core-Middleware

# Code Highlights

- Implementation of the IActivityLogger

- Microsoft.Bot.Builder.History namespace provides interfaces and classes for performing intercepts

- IActivityLogger: Contains the definition of the functionality that a class needs to implement to log message activities

- Log what you want in the LogAsync method

```
public class DebugActivityLogger : IActivityLogger
{
    public async Task LogAsync(IActivity activity)
    {
        Debug.WriteLine($"From:{activity.From.Id} - To:{activity.Recipient.Id}");
    }
}
```

# Life Cycle Events

- Application life cycle

- Application raises events that you can handle and calls particular methods that you can override

- To handle application events, you can create a file named Global.asax in the root directory of your application

## Application_Start Event

- Application_Start method is called only one time during the life cycle of an application

- Perform startup tasks

## Application_End Event

- Called once per lifetime of the application before the application is unloaded

# Conclusion

- Chat history can be useful for advanced analytics and monitoring

- IActivityLogger interface to log

- Life Cycle Events in Global.asax

- Store logs anywhere