



Azure AI and Azure SQL Database: Using Data to Power Up Your Skillset and Career

Matt Gordon

Azure Indy – September 4, 2024

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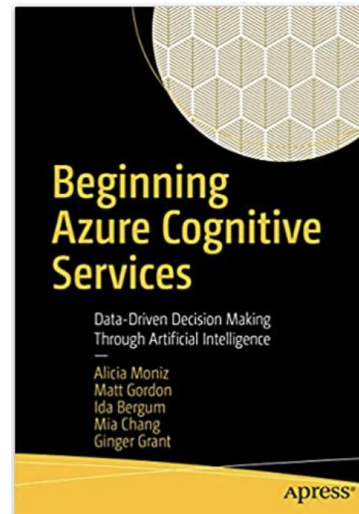
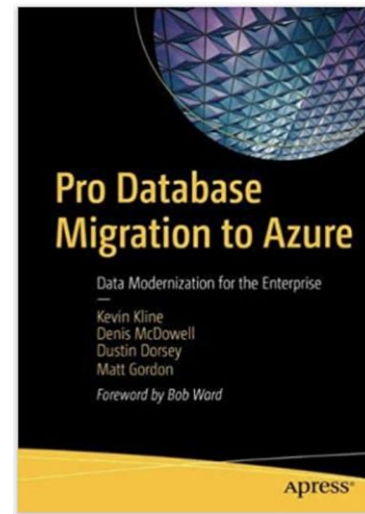
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About Me

- 20+ years of on-prem/cloud SQL experience
- Microsoft Data Platform MVP
- Redgate Ambassador
- Led cloud migrations large and small
- Worked on Azure AI since 2017
- Leader of Lexington, KY (USA) Data Technology Group





What Is AI (and What Isn't It)?

- The media says it's ChatGPT
- Some people say it's a lot of hype
- My son said "it's just a bunch of if/then statements that run really fast"
- Oxford Languages says it's "the theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages."

What Is AI To Data People?

- It's Copilot experiences in our development environments
- It's a robot tuning our code and our developers' code
- It's ChatGPT helping us program in a language we don't know or breaking coder's block if we're stuck
- It's enabling accessibility for people who have physical challenges to typing and other actions
- It's an annoyance – maybe our manager thinks they don't need us anymore because “the AI” will do it all

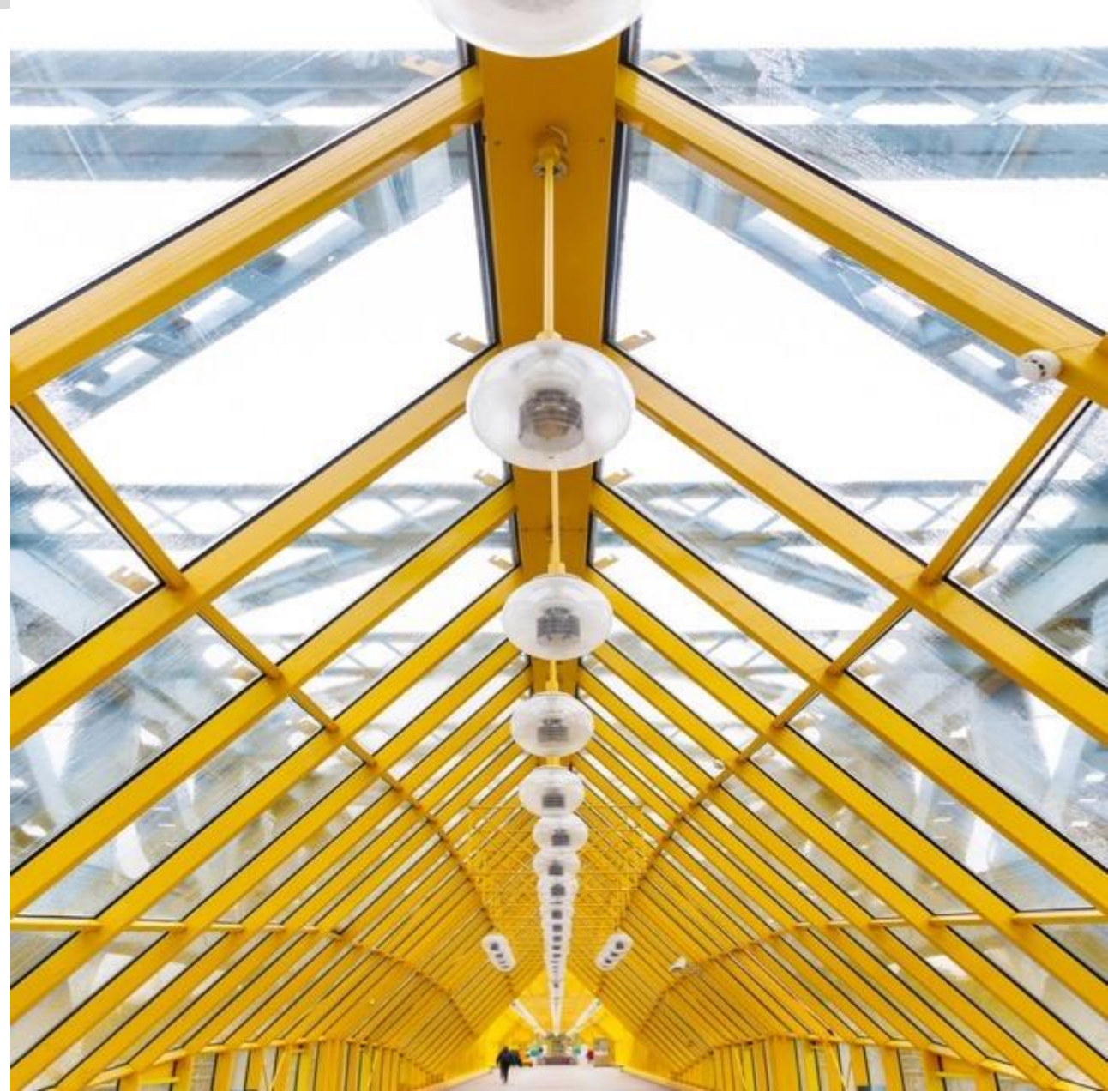


Azure Cognitive Services

- Speech
- Language
- Translator
- Vision
- Azure OpenAI
- Rebranding over time (quickly) as Azure AI

How Can I Use Azure AI APIs?

- Logic Apps
- Power BI
- Power Apps
- Power Automate
- Studio “experiences”
- REST API calls



AI-Powered New Employee Welcome Bot

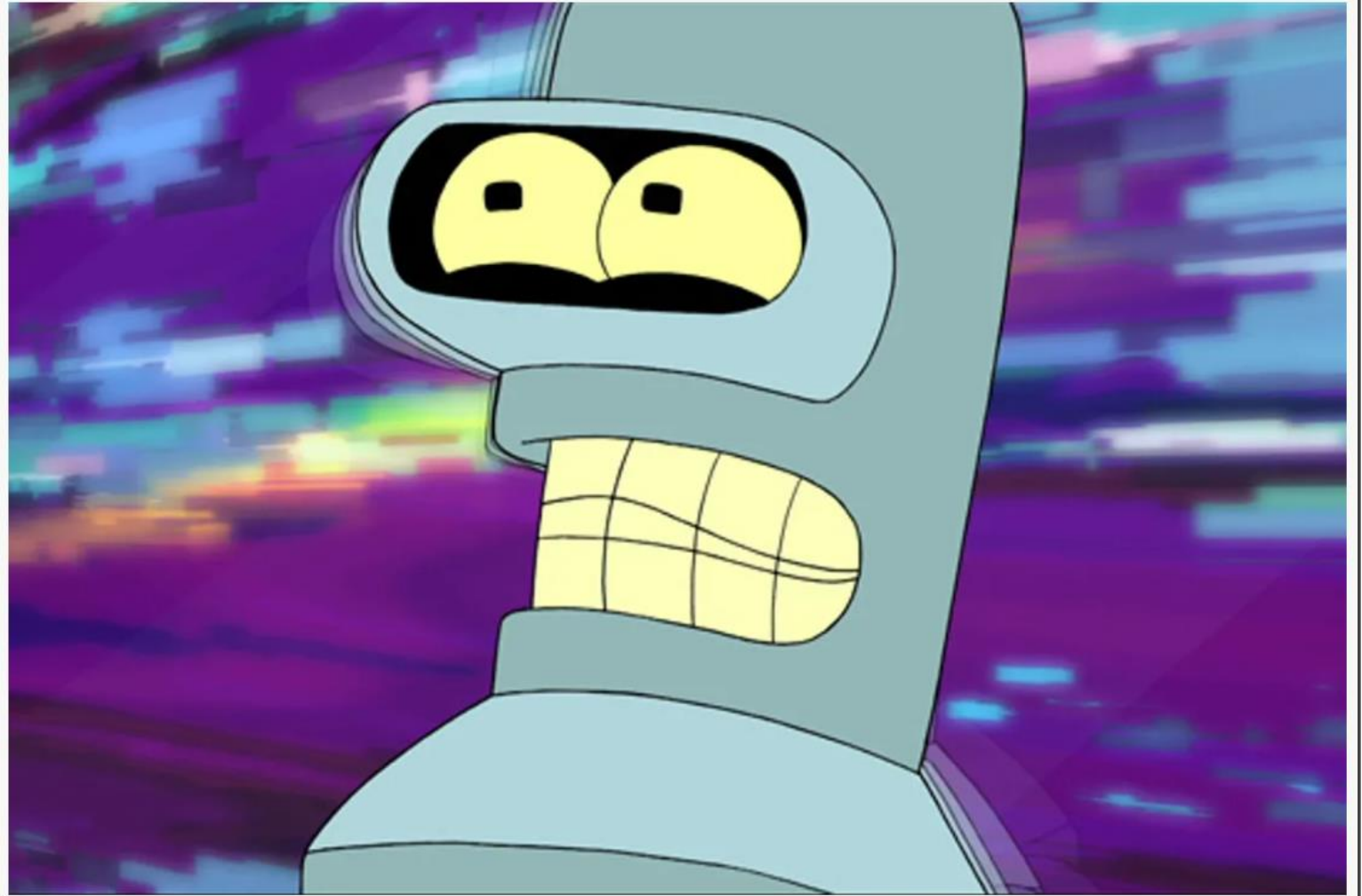


Image credit: FOX/Comedy Central

Copilot in Azure Data Studio



alamy

Image ID: C87BE5
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Image credit: Alamy

**AI Responds to
Angry Emails
with
Power Automate**



Image credit: DriveTribe Facebook/BBC

**ChatGPT, Meet My
Database**



Image credit: New Line Cinema

Database, Meet
ChatGPT



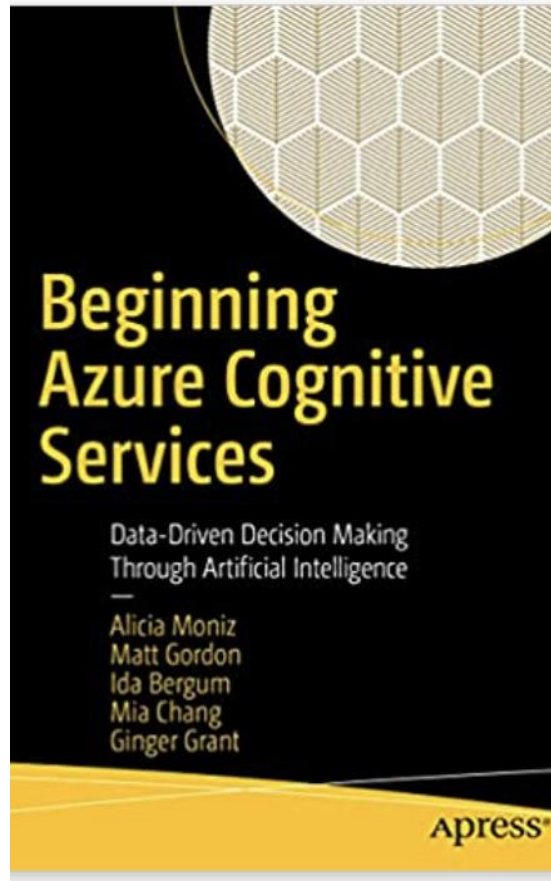
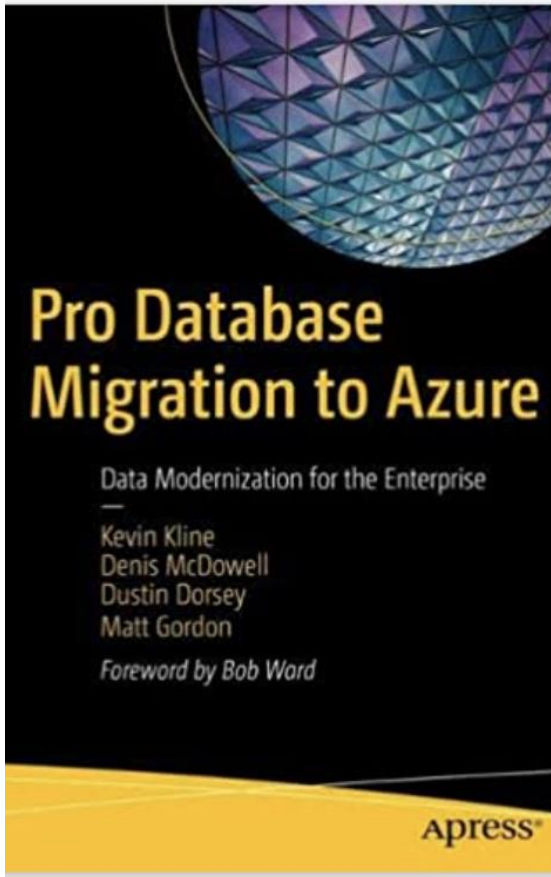
Image credit: New Line Cinema

What Comes Next?

- Deploy Copilot from chat playground in OpenAI Studio
- Vector Search in Azure SQL Database
- RAG (Retrieval Augmented Generation) calling OpenAI from Azure SQL Database
 - Refines LLMs with external data from our database
- Something we haven't heard of yet...

How Will AI Impact Data People?

- It can help us do our jobs
 - Conversation bots to handle mundane and/or repeated questions
 - Copilot experiences in ADS and other tools
 - Automated responses to tickets, emails, etc.
 - Create our own data dictionaries using the power of LLMs?
 - ChatGPT-style conversations over our data
- We're already surrounded by it
- This session will change every time I present it – that's the speed of development in this space
- It's overhyped, but don't dismiss it – engage with it (and maybe have a little fun)



The Slide Where I Sell My Books

- [Cognitive Services book](#)
- [Database Migration book](#)

Thanks For Attending!



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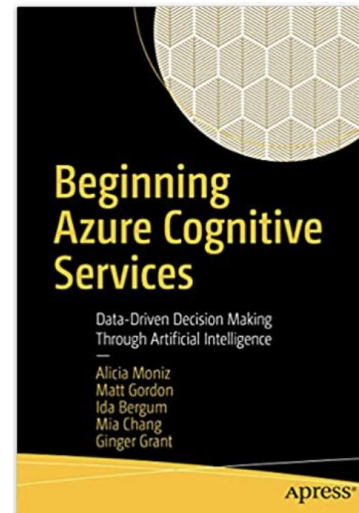
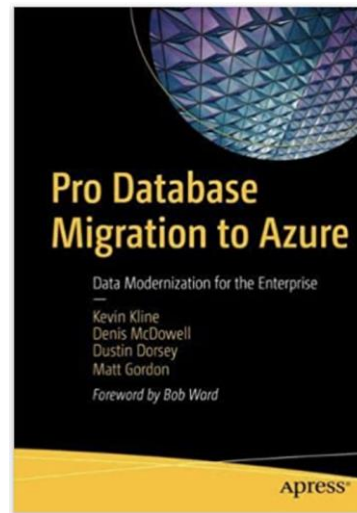
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https://github.com/sqlatspeed/2024_presentations



Resources

- [Buck Woody's generative AI session](#)
- [Copilot for Azure Data Studio](#)
- [GitHub Copilot in Azure Data Studio – Warwick Rudd's presentation](#)
- [Language Studio](#)
- [Speech Studio](#)
- [Vision Studio](#)
- [Brian Spendolini's Azure SQL/OpenAI blog](#)
- [Buck Woody's Azure SQL/OpenAI Azure Data Studio blog](#)
- [Chat with your data in Azure SQL Database](#)