Maybe use the chatbot solution as showing the traditional approach vs. a new solution supported by

Ideas:

* Dev’s think of DS as overly complicated – GenAI can help in some cases
* End with that there’s a role for each of the 3: predictive analytics, functional programming, GenAI – if you can get 2 of the 3 as a developer you can really stand out
* List of skills of a data scientist – which one’s do you need to know in order to go how far?
* 3 layers:
  + Dev and DS
  + Dad and Daughter
  + Generational

The Developer and the Data Scientist

And How GenAI Brings Them Together

Join us for an enlightening talk featuring a unique duo – a seasoned software developer and a savvy data scientist – as they explore different approaches to modern software problems. They’ll start by delving into the pre-Gen AI era to understand the divergent paths of developers and data scientists – highlighting the different tools, methodologies, and mindsets that characterized their work. From there they’ll demonstrate how the latest advances in GenAI open a new pathway for developers to take advantage of data science power without needing a second degree.

* Learn what software problems benefit from a data science perspective.
* Learn easy tools you can integrate into your current toolbox.
* Learn how to take advantage of GenAI beyond the chatbot.

Emily is a data scientist and engineer who is passionate about addressing seemingly insurmountable problems with intelligent technical solutions. Her training in physics and quantum machine learning at CERN, Fermilab, and other top research facilities in the world taught her to face novel and complex problems confidently and systematically, while her experience in consulting has broadened her perspective and skillset. She emphasizes effective communication in her work to ensure results lead to positive change - a trait that is especially important in an area considered a black box by those outside of the field.

## Outline

* Dev vs Data Scientist ways of thinking
  + Dad – talks about the dev way
  + Emily – talks about the DS way
  + It’s all a function – Dad’s talk ‘Predictive Modeling with Azure ML and R”
  + Could use buzzer idea to point out weaknesses/strengths of both
* Well, as a developer I’m not going to go get another degree…So here’s how a developer can use DS superpowers with GenAI without getting another degree
* Gen AI Demo
* Calls to action – either:
  + I’m a developer who works with data scientists, how do we work together
  + I’m a developer in a company without data scientists, how do I do better

## Dev Way of Thinking

Living in a rule-based, deterministic world

* Find someone who knows – get an expert (real person or someone who has written something)
* Figure out an object model
* Figure out business rules
* Figure out data flow
* Identify edge cases
* Write code to model what you’ve learned
* Put together tests (might do this first) to verify functionality
* Iterate (writing code, writing tests) until all requirements are met
  + Requirements are defined in user acceptance tests
* Push to production and monitor logs

Then could go into ‘what do you really do?’ – in meeting really trying to understand the requirements

## Data Scientist Way of Thinking

Living in a data-based, non-deterministic world

* Find a subject matter expert in the company (knows the data, does the process that we are trying to automate, etc.)
* Get to know the data
  + Gen AI can help!
* Determine the target and features
* Train and test different models
* Iterate feature engineering and training/testing/tuning until goal accuracy/precision has been met
* Deploy and monitor for drift

Could then go into ‘what do you really do?’ – play with the data

## Scratch-Pad

* What kind of projects would you NOT be willing to pick up as a developer vs data scientist
  + Developer wouldn’t want to do complex prediction
  + data scientist wouldn’t want to do something with a finite set of rules that is working well, or something where there is no data
  + Maybe with Gen AI we can widen this definition a bit\
* Gen AI can help explore data
* Need to decide whether we are talking about using Gen AI as the assistant or as the solution (e.g. helping walk through a problem or as the API call)
* You Might Be a Data Scientist quiz
  + You liked chemistry more than you liked math
* Using the buzzer
  + During the demo
  + During the introductions
* What is data science power
  + Dessert power 😊
  + Exploring
* What are the ways for Gen AI to help a developer take advantage of data science power
  + Helps a dev explore data
* Where do you really spend your time? (Dev vs data scientist)
  + Data scientist spends a ton of time analyzing, cleaning, and handling data
  + Developer spends a lot of time figuring out the rules and drilling down on requirements

## For Next Time

* What are the ways for Gen AI to help a developer take advantage of data science power
* What is data science power