GDEVS - [SOTR076] SEARCH OFF THE RECORD - 76TH EPISODE - VIDEO

[00:00:10:27] - **Lizzi**
Hello, hello, and welcome to another episode of Search Off the Record, a podcast coming to you from the Google Search team discussing all things Search and maybe having some fun along the way. My name is Lizzi, and my co-host today is Mr. John Mu. Hi, John.

[00:00:25:09] - **John**
Hi.

[00:00:26:18] - **Lizzi**
And, today, we have a special guest with us from the Search Quality team, Elizabeth Tucker, who traveled all the way from the US to visit us in Zurich this week just for this podcast recording. No, I'm sure you were here for other reasons. Hi, Elizabeth.

[00:00:38:19] - **Elizabeth**
Hey, Lizzi, great to be here.

[00:00:39:26] - **Lizzi**
I'm super happy to have you on this podcast because we get to talk about your background. We worked a little bit on other projects, but I want to know more about your time at Google. And I think you have something with data science in your background, is that correct?

[00:00:54:02] - **Elizabeth**
Absolutely, so I started at Google about 19 years ago as a data scientist, and I was a data scientist for about 15 years, measuring various aspects of Search, what Search does well, what needs improvement, looking at metrics and measurements for experiments. I loved it. After about 15 years, I was ready for some new challenges, so I switched over to Product Management. I'm currently a Director of Product Management and Search Quality.

[00:01:20:08] - **Lizzi**
Super interesting. Did you always know that you wanted to be a data scientist? Did you make another career path change when you came to Google?

[00:01:26:18] - **Elizabeth**
I came to Google as a data scientist, but I started out, in grad school, I studied theoretical math, like useless but beautiful theoretical math, algebraic topology. However, there are not that many job openings in academics and math. And somewhere, along the way, I actually switched over into industry doing analysis. And then, when Google started, I was very interested and passionate about new technology, and so thrilled to then have the opportunity to join Google as a data scientist.

[00:01:58:02] - **Lizzi**
Do you know anything about apologetic mathematics? Did I hear you right?

[00:02:03:11] - **Elizabeth**
Algebraic topology. Don't worry about it.

[00:02:07:16] - **Lizzi**
Is it just like us saying sorry for making mathematical mistakes. What is this?

[00:02:12:13] - **Elizabeth**
Algebraic topology. Well, I was studying sort of, maybe in layman's terms, kind of the shape of space. There's this joke about how topologists can't tell, I don't know, a donut from a coffee cup, so sort of how space fits together, maybe, is a one way to explain it.

[00:02:32:15] - **John**
That seems very theoretical.

[00:02:34:02] - **Elizabeth**
It is very theoretical, although I will say that, in this stage of ML and embedding spaces, some of that mathematical background has come in useful.

[00:02:42:07] - **John**
As a data scientist at Google, what do data scientists do here?

[00:02:46:01] - **Elizabeth**
Yeah, that's a great question. I worked on this Search Data Science team. A lot of what we were trying to do is understand Search from the perspective of data: what do users do when they come to Google, how do people search, how do we know if they are finding what they're looking for. I think one of the challenges that we face is understanding how Google is performing overall. But what we've generally found, in Search Quality, is that you can make one search much better and meanwhile destroy 50 more. So it's really important that we can do these aggregate large-scale

measurements, as well as find specific types of searches that are working well, or not working well so that we can fix them.

[00:03:24:06] - **Lizzi**
Do you have a sense for how much we're focusing on what's doing well versus what's not doing well, in terms of the searches that we're looking at?

[00:03:32:14] - **Elizabeth**
That's a great question. We have various ways to try to understand where we're doing well and not doing well. To say the obvious thing: We want to make every single search that people do a great experience. We want to help everyone find what they're looking for. So we are a lot more concerned when we see types of searches that aren't doing well. That does get a lot of our focus, and sometimes it can be hard to find and identify specific slices, as we say, that aren't doing as well and find fixes for them. For the most part, we do see that people are fairly satisfied when they come to Search. I think a lot of people really just, at this point, kind of take for granted that they can come to Google, type something in, and basically find what they're looking for. However, there are occasions when people do have bad experiences when we don't show what they're looking for. And, of course, that's exactly what we want to fix.

[00:04:24:17] - **Lizzi**
In terms of the satisfaction bit that you mentioned, are there more granular ways that we're looking at? What does it mean to be satisfied when you come away from a search?

[00:04:33:12] - **Elizabeth**
Absolutely, Lizzi. Inside Search Quality, we think about so many important dimensions of search. We have so many systems. Obviously we want to show content that's topically relevant to your search. In the early days of Google Search, that was sometimes a challenge. Our systems have gotten much better, but that is still sometimes, for especially really difficult searches, we can struggle with. People search in so many ways: Everything from, of course, typing in keywords, to speaking to Google and using normal everyday language. I've seen amazing searches. "Hey Google, who is that person who, years ago, did this thing, and I don't remember what it was called." You know, these long queries that are very vague. And it's amazing now that we have systems that can even answer some of those.

[00:05:24:10] - **John**
When you look at the data, I assume biases come up. Is that a topic that we think about as well?

[00:05:30:22] - **Elizabeth**
Absolutely. There are all sorts of biases that we worry about, when you're looking for information, are we disproportionately showing certain types of sites, are we showing more, I don't know, encyclopedias and evergreen results or are we showing more fresh results with up-to-date information, are we showing results from large institutional sites, are we showing results from small blogs, are we showing results from social media platforms where we have everyday voices. We want to make sure we have an appropriate mix that we can surface the best of the web in any shape or size, modest goals.

[00:06:08:10] - **John**
The web is pretty crazy sometimes.

[00:06:10:07] - **Elizabeth**
Yes it is.

[00:06:11:01] - **John**
How would you say user experience research connects with data science? Or is that something that is completely separate?

[00:06:18:07] - **Elizabeth**
I have, at this point, wonderful user experience research partners and wonderful data science partners, and they're really complementary, and we really need both to understand Search. My wonderful user experience researchers, or UXR, as we often call our partners, can do qualitative studies such as: I just saw a really great series of diary studies. They asked people to make a video when they use Google, and then they showed us, they played for us, videos of people who weren't finding what they were looking for. As someone who works on Search systems directly, it is so amazing to hear from people who aren't Googlers who are looking at the search result page and talking about their experience live. That's a fabulous form of qualitative feedback that we can get. UXR can also do some more quantitative feedback. For example, we can try to survey our users and understand how often do people have a bad experience and of what type. Getting those insights from people who are actually using Search at an everyday level to do important tasks, that is one of the superpowers from our UXR team. From our Data Science team, we get these broad scale measurements, so we can slice and dice to figure out quantitatively how can we identify where we're not doing well. When we run an experiment, how can we tell whether we're making things better or worse? Both work together really synergistically to help us understand and improve the experience for people who come to Google.

[00:07:49:22] - **Lizzi**
Is this something that the teams are working together and you, right now, as a product manager, are you still in touch with the data scientists and the user researchers?

[00:07:58:20] - **Elizabeth**
Oh, absolutely. We talk multiple times a week. As part of any large effort, we would typically have, of course, an engineering team, often a product manager, data science partners, UXR partners, and cross-functional partners of many types. For example, I'll often talk to policy experts. Search has some interesting policies that we need to follow. We need to follow the law. So there's some really complicated issues that we deal with. We need people of many different types of expertise to take on these really sometimes difficult challenges.

[00:08:32:23] - **Lizzi**
So the topics for a user researcher study, does that come up from the user researcher team or from you or from a combination of factors in terms of what is the thing that we want to know that people are struggling with or, for feature, this type of thing?

[00:08:47:11] - **Elizabeth**
Questions come up from so many places. It could come from, say, for example, a Google exec who has a question, maybe they themselves have a search that doesn't work well and then might ask, "How often does this happen? Is it just me?" We've had situations where we've gotten external criticism, justly sometimes, for what we're showing on Google Search. They could come up from the Data Science team, from the UXR team identifying what they think are issues in the data. They could come up from an engineering team who's trying to improve a system and has a question, so for example, "Hey, we have this idea. Here are some of the things that we can do. Is this actually going to help people?" Questions come up everywhere. We ask a lot of questions in Search Quality. But, yeah, we keep them quite busy.

[00:09:39:03] - **Lizzi**
How do you prioritize what are the most important questions?

[00:09:42:10] - **Elizabeth**
That is a great question itself. I'm constantly peppering our Data Science and UXR teams with questions. Obviously, they don't have dedicated people to follow me around and answer all of them. They do a lot of prioritization themselves. But, in terms of problems that we're observing, certainly we think about things like frequency and severity. It is fairly rare that people encounter websites that are financial scams. Thankfully. We have a lot of systems that try to address that, but that is a horrible problem. You know, malicious downloads, similar. Even these relatively infrequent problems, if they're severe enough, absolutely warrant study. And then, of course, if people are having daily experiences that aren't great, high frequency but lower severity, we want to study and improve that too.

[00:10:29:24] - **John**
It must be challenging if you're so focused on finding faults in the system. It feels like you almost need that balance of people coming to you and saying, "Well, actually, search is really good. These are small aspects that are there."

[00:10:47:06] - **Elizabeth**
That is a good point. I will say a lot of people do come to us with problems, but a lot of people also talk about, "Hey, wouldn't it be cool if we could..." There are lots of ideas that we explore. We're constantly trying new things, and a lot of what I work on is actually finding the good, even taking searches from good to great. It isn't all bad. But, having said that, when people do have a bad experience, that is something we absolutely want to fix and people are just much more likely to speak up when something bad happens and sometimes speak up loudly, as perhaps they should.

[00:11:22:21] - **John**
When people speak up loudly, is the initial step to do some kind of a demotion where you say "Well, this was clearly a bad site that we showed, therefore we should show less of it"? Or how do you balance the positive side of things that maybe we should show more of versus the content we should show less of?

[00:11:44:19] - **Elizabeth**
Yeah, that's a great question. So I work on many different systems. It's a fun part of my job in Search Quality. We have many signals, many systems, that all need to work together to produce a great search result page. Some of the systems are by their nature demotative, and webspam would be a great example of this. If we have a problem with, say, malicious download sites, that's something we would probably want to fix by trying to find out which sites are behaving badly and try to make sure users don't encounter those sites. Most of the systems I work with, though, actually are trying to find the good. An example of this: I've worked with some of our core topicality systems, so systems that try to match the topic of the query. This is not so hard if you have a keyword query, but language is difficult overall. We've had wonderful breakthroughs in natural language understanding in recent years with ML models, and so we want to leverage a lot of this technology to really make sure we understand people's searches so that we can find content that matches that. This is a surprisingly hard problem. And one of the interesting things we found in working on, what we might call, topicality, kind of a nerdy word, is that the better we're able to do this, the more interesting and difficult searches people will do.

[00:13:09:12] - **Lizzi**
Ah, so once it starts getting better for them, then they realize that they can enter these longer queries that might be possible now.

[00:13:16:12] - **Elizabeth**
Yes. So Google used to be very keyword focused. If you just put together some words with prepositions, we were likely to go wrong. Prepositions are very difficult or used to be for our systems. I mean, looking back at this, this is laughable, right? But, in the old days, people would type in one, two, three keywords. When I started at Google, if a search had more than four words, we considered it long. I mean, nowadays I routinely see long searches that can be 10-20 words or more. When we have those longer searches, understanding what words are important becomes challenging. For example, this was now years and years ago, maybe close to ten years ago, but we used to be challenged by searches that were questions. A classic example is "how tall is Barack Obama?" Because we wanted pages that would provide the answer, not just match the words how tall, right? And, in fact, when our featured snippets first came about, it was motivated by this kind of problem. How can we match the answer, not just keyword match on the words in the question? Over the years, we've done a lot of work in, what we might call, the topicality space. This is a space that we continue to work in even now.

[00:14:37:10] - **John**
Anecdotally, one of the things I noticed is my kids search very differently than I did when I first started using Google, and that feels kind of like, to map to what you talked about, where initially Google was very focused on keywords, and that's kind of how I still search. But, when I see how my kids search, they write like full questions and they expect answers.

[00:15:02:10] - **Lizzi**
Is part of this like a learned behavior thing where we grow up thinking that this is how the tool should respond to us, and now the next generation is using it differently and it's working out that way.

[00:15:31:10] - **Elizabeth**
Well, we put in a lot of work so that people can ask questions fairly naively. This isn't something that just happened, but I've observed that too. I was working at Google when I first started a family, and so watching them interact with technology has been fascinating. They would try searches where I'd be like, "Oh no, that'll never work." And then sometimes it would. And so I think some of my search behavior has changed, as I've had more confidence that Search could actually kind of handle that question. As a fun anecdote, when one of my kids was about five years old, maybe a little older, I had shown them how to voice search on Google, and he asked the question something like, "What is the tallest mountain underwater?" And he meant a mountain completely underwater. We did have featured snippets then, I think, and the answer that was given was wrong. And my child, who probably had had a bit of a frustrating day, just started sobbing and I said, "What's the matter?" And he said, "Even Google isn't listening to me."

[00:16:18:25] - **Lizzi**
Oh my gosh.

[00:16:20:12] - **John**
Oh no.

[00:16:21:09] - **Elizabeth**
Of course it was just a matter of not quite giving him the correct answer to his admittedly unusual question. But it was interesting that my kids have grown up in a world where they expect to be able to ask Google virtually anything in any way and get an accurate answer. And I think that speaks to all of the work that we have done to make that possible.

[00:16:41:12] - **Lizzi**
One thing that I've noticed that is maybe not working so well is the NOT query like looking for things that are not included in this? Is this something that you've also seen coming up?

[00:16:51:14] - **Elizabeth**
Yes, although I will say it used to be that these queries were almost hopeless. It's really hard to know when not means that you don't want the word there, or when it has a different kind of semantic meaning. Prepositions, in general, are another hard one, and one of the really big exciting breakthroughs was the BERT paper and transformer-based machine learning models. When we started to be able to get some of these complicated linguistic issues right in searches, I was really thrilled to be part of a team, as a PM, that worked on bringing some of this natural language understanding to Search. I would not say this is a solved problem. We're still working on it.

[00:17:37:19] - **John**
That brings me to a question: How do we even know that Search is getting better?

[00:17:41:18] - **Elizabeth**
I have spent a long time thinking about this question myself. My short answer is it's really hard. One of the things that we do see is, the better we do, the harder searches that we get. To a certain extent, the bar does tend to get constantly upped with our own success, but we have a lot of measurements that we do. Everything from surveying people; sometimes when you search on Google, you might get asked a question, like how helpful are these results? We use a lot of metrics where we sample queries and have human evaluators go through and evaluate the results for things like relevance. We look at how people behave on Search, does it appear that people are finding what they're

looking for from the signals that we can collect? Putting all of these different methods together, we do try to understand whether we're doing a good job, whether things are improving. Technology is constantly changing. Websites are constantly changing. If we just stood still, Search would get worse.

[00:18:48:06] - **Lizzi**
Yeah, I'm assuming that these kinds of things, like you can fix something, but then another thing pops up, and so it's just like a whack a mole to tackle these things as the web develops.

[00:18:58:15] - **Elizabeth**
Yeah, a constant challenge. Search is not a solved problem and can almost never be a solved problem because the world around us change. Search is so much about helping people find what they're looking for. The internet's constantly changing. People's needs are constantly changing. Our work is almost never done.

[00:19:16:09] - **John**
Are there any anecdotes where you notice that the data was perhaps misleading, that you were focused on some metrics, but almost focused on the wrong thing?

[00:19:26:08] - **Elizabeth**
Absolutely. I think one important thing that we all have to acknowledge is that not everything important is measurable, and not everything that is measurable is important. In the early years of Google, we had surprisingly few measurements. I mean, before I started, apparently it was pretty easy to see just from looking at a handful of searches, whether an algorithmic improvement was good or not. Those days are long gone, and over time, we've developed more and more measurements to look at all sorts of aspects of Search. And not only do we have to look at different aspects--are results topically relevant, are they accurate, are they trustworthy, are they fresh--we also have to make sure that we're looking across all of the different kinds of searches that people do. There are many searches that are relatively easy to get right, in the sense that, if someone comes to Search and asks for Facebook, our systems are pretty likely to show the result Facebook. But there are lots of unusual searches, difficult searches. There are searches where someone's health or well-being may be at risk. And so we want to make sure that we are examining the quality across all of the different searches that people do. People search in over 100 languages all around the world. You can type anything into the search box, and we need to find accurate, trustworthy, fresh, helpful results in less than a second. I mean, that's the most incredible technical challenge and understanding if we're getting it right, where we're getting it, right, where it needs focus out of those billions of queries that come in every day. Man, is that a hard problem?

[00:21:08:21] - **Lizzi**
Is it always clear what the data means?

[00:21:11:24] - **Elizabeth**
No, no.

[00:21:14:07] - **Lizzi**
Is it fair to say that a big part of a data scientist is the analysis part and interpreting what that means?

[00:21:19:28] - **Elizabeth**
Yes, and I think there can be measurements that are helpful overall but difficult to interpret. Back in the early, early days of Google, and some of this is before my time even, we used to look at how many searches Google got a day. In fact, when I started there were these wonderful graphs. Someone even did them in crayon on computer paper to show the number of searches over time. And it is true, in the long term, generally, if people are searching more, it's because they're finding Google helpful and coming back. And we certainly did see, especially in the early days, when there was lots, maybe a lot more, headroom to improve Search. We can make a change and see that people would search more. One of the most dramatic examples I saw of this during my time at Google was when we launched segmentation for the Thai language. Thai is a language where typically people don't put spaces between words. People didn't put spaces in their searches and documents. Web pages didn't have spaces. It is a lot harder to match, especially keyword match, when there are no spaces between words. Early on in my Google career, I was a data scientist, and there was a change to better handle, what we call, segmentation, to figure out how to break things down into words. I don't remember the exact numbers, but once we rolled that out in Thailand, it was dramatic. Search was clearly more helpful and people were searching a lot more. But, over time, I would say that these days there isn't such dramatic headroom. Luckily. One could argue that, until we launched this Thai, Search was almost broken. Over time we've developed more and more metrics, but also seen how those metrics can be misleading. For example, one thing we've seen is that, in the short term, if search doesn't work as well, people can, in a short-term way, actually search more because they're struggling harder to find what they're looking for.

[00:23:31:12] - **Lizzi**
So that metric of more searches can sometimes mean that something's broken.

[00:23:35:26] - **Elizabeth**
Ironically enough, yes. Now, in the long term, if something isn't working well, people search less. So a measurement that can be good in the long term can be misleading in the short term. This is the kind of nuance that we have to work with. No measurement is perfect. But, over time, we also have developed more robust measurements, more

comprehensive measurements. One thing that we don't use as a measurement is the number of queries for this very reason, at least not in the short term.

[00:24:02:08] - **Lizzi**
What do you mean number of queries?

[00:24:03:28] - **Elizabeth**
So, for example, we never look at a change to Search and say, "Oh, people are searching more!" with this treatment than in control and in an experimental setting. That is not a good metric to optimize against. In the short term, it could lead us to make bad decisions. We have to be very careful about what metrics we use to measure potential changes to Search. We have to be very careful about interpretation. Measuring Search, I think, is almost a harder problem than improving Search.

[00:24:30:29] - **Lizzi**
And they're tied so closely together. How do you know how much you've improved without having the measurement?

[00:24:38:00] - **Elizabeth**
Exactly. And that's why, in many ways, I feel like it's somewhat of a natural progression from data science to product management for me. A lot of what I do is try to figure out how to improve the user experience. Yes, we have to be able to measure in order to improve, so having a background in data science is incredibly helpful inside Search Quality.

[00:25:00:00] - **John**
What do you do as a product manager now that's different?

[00:25:03:00] - **Elizabeth**
So, as a data scientist, my primary job, of course, was measurement and data analysis. As a product manager, my role includes things like product vision: what should we work on, where should we take Search next. Obviously, I'm one of many, many product managers. I work with a variety of cross-functional partners, getting insights from data scientists, UXR. I work with many engineering teams. A lot of what we do in Search Quality is very technology based, so understanding the potential of new types of technology, that's absolutely an important and wonderful part of my job. It's been a really fast-paced, changing time recently. There's so many new breakthroughs in ML and AI. It's an exciting, exciting period. Maybe we can finally solve those pesky NOT queries.

[00:25:54:25] - **Lizzi**
Would the NOT query thing be considered the product that you're managing?

[00:25:59:01] - **Elizabeth**
As a product manager, I'll often take on issues in Search. They could be broader issues like how do we solve some of our natural language understanding problems. I've worked with teams and specific systems that have challenges like how do we bring, say, more sophisticated models into Search and yet still maintain our understanding and our control over our systems. It's really important to us from an engineering perspective to be able to debug, understand, and fix problems. And so making sure our systems are, we often use the words, understandable and controllable while we get the incredible benefits that more sophisticated models have to offer. That's one of the challenges that I've worked with teams on.

[00:26:43:13] - **John**
One thing I heard that you also worked on is the Search Quality Rater Guidelines. Can you tell us briefly what that is all about?

[00:26:52:21] - **Elizabeth**
Absolutely. I think this started in my first couple of days at Google.

[00:26:57:16] - **Lizzi**
Whoa.

[00:26:58:03] - **Elizabeth**
Yeah, I was a new data scientist. One of the measurements that we did, even back then, was to have evaluators rate the results for searches. We had this document, which I could be wrong. I think it was around 10 to 20 pages at the time, maybe, but it was the instructions that we gave to the evaluators. If I remember correctly, we're talking maybe about 50 to 100 evaluators in a couple of key languages. We had a set of instructions, and it was pretty heavily focused on topical relevance, because, in the old days, topical relevance was one of our biggest challenges. I'm a new data scientist. I'm looking at some measurements that we were doing. This is back in the days when Google was a much smaller company. I actually sat very close to Larry and Sergey's office. I almost never saw them, by the way, but we had our quality graph up on the wall. My manager was saying, "Hey, we're reporting these numbers. Take a look. Figure out whether this measurement is working or not." Of course, the first thing I took a look at is what is the spec, how are the evaluators doing the labeling. And, of course, I looked at the way that we were sampling the searches, the whole process, soup to nuts, of how this measurement was produced. One of the things that I noticed was that, of course, the instructions that you give the evaluators play a really big role in what comes out of the measurement. And so, even though I had this very math- and data-based background, I was like, "Huh, okay, I think

this is mostly working, but there are a few places we may want to make some changes."

[00:28:47:28] - **Elizabeth**
So that's the beginning of me working on what later became the Search Quality Rater Guidelines. Math nerd me saying, "Hey, I think we got to change the instructions here." We began to measure more things than, of course, just topical relevance. I mean, topical relevance is important, but that's not the only important thing. I continue to work on them as a data scientist. Eventually we published the guidelines externally as a form of transparency but also communication to show the world what it is that we are trying to achieve and to help people hold us accountable when we don't do what we've set out to do. Now, as a PM, I'm the Product Manager of the Search Quality Rater Guidelines. I continue to work extremely closely with the Data Science team. We have many people involved, such as, for example, Search Policy. There are many aspects to the Search Quality Rater Guidelines now.

[00:29:43:22] - **Lizzi**
Did the Search Quality raters fall underneath the qualitative or quantitative UXR bucket?

[00:29:49:20] - **Elizabeth**
I do work with user experience researchers as well. In fact, we've had many wonderful collaborations on some of the content in the Search Quality Rater Guidelines. We do measurements at a fairly large scale that involve a lot of different people, and so user experience researchers often help us understand what aspects of Search are important, which then influence what we have in our Search Quality Rater Guidelines. We have a whole program by which we are able to hire evaluators through vendors. Of course, we have to make sure that they're giving us good data. We have to make sure that eventually the measurements that come out using all of these human assessments are validated. There's a large process to producing a measurement that's helpful.

[00:30:39:13] - **Lizzi**
When you say validated, what does that mean?

[00:30:41:20] - **Elizabeth**
Ideally, what we want with a measurement is that, if the measurement goes up and to the right, that means that people searching on Google are happy. If the measurement goes down, that means that we've done something wrong. That's sort of our ideal kind of measurement. We've worked really hard over the years so that measurements that we do using the Search Quality Rater Guidelines as instructions can point engineering teams and product managers and everyone in the right direction. Whenever we run experiments and look at potential launches to Search, we actually use measurements based on the Search Quality Rater Guidelines as part of the process.

[00:31:21:26] - **John**
One of the things that always comes up from talking with SEOs is the topic of E-E-A-T, which I believe comes from the Search Quality Rater Guidelines. One of the questions from the SEO world is: Is this a ranking factor? Do I have to kind of apply E-E-A-T to my pages? How would you kind of look at that?

[00:31:44:24] - **Elizabeth**
Well, first of all, I will tell you the origin story. In the beginning, it was E-A-T, or eat. The Search Quality Rater Guidelines currently has two parts. Part one is roughly the Page Quality Guidelines, where we have the concept of E-A-T, and then there's another part that's the needs-met portion of the guidelines. When we first were developing the Page Quality Guidelines and the Page Quality Metric, which was some of the work that I and my data science team did, we had some early version of the guideline, a lot less polished and comprehensive than now, and littered throughout this early version was the words expertise, authoritativeness, and trustworthiness. They appeared everywhere; those three words. And so we would ask evaluators to do tasks and write comments, and we would ask evaluators also to give us feedback on these tasks: Is this task an easy thing to do? Tell us what you know. Tell us about your thinking process. They got so tired of writing the words expertise, authoritativeness, and trustworthiness that evaluators themselves started organically shortening that to E-A-T, or eat, and our vendors as well. When we saw this, we're like, "Hey, yeah, that's good! Let's go with that." These are fundamentally important concepts, but you can think of E-A-T, or now E-E-A-T.

[00:33:10:03] - **Lizzi**
Okay. I was going to ask you, how do we properly say the new acronym out loud coming from the product manager?

[00:33:16:00] - **Elizabeth**
Okay. I wanted it to be like E-squared-A-T, but everyone's like, "No, that's dorky and horrible." So we've been saying E-E-A-T, but, I don't know, we often shorthand it in writing, which is where this abbreviation came from. But this really is a mnemonic device to remind our evaluators of one of the really important things to think about. It's not the only thing to think about when they're doing page quality rating, but it is a very important aspect. So there is no E-A-T or E-E-A-T rankings. But this really is for people to remember. It's a shorthand, something that should always be a consideration, although different types of results arguably need different levels of E-E-A-T. So, if the search is like symptoms of a heart attack, we absolutely need trustworthy results. But, if the search is something like cute kittens, one of my personal favorite Google searches, E-E-A-T might not be as important as some other considerations like how actually cute those individual kittens are. When I search for cute kittens, I want the cutest kittens of the internet. E-E-A-T's important. It's a mnemonic device. There is no ranking signal that's a one-to-one match with E-E-A-T. As an example of this, I would say PageRank, one of our classic Google ranking signals, probably is sort of along the lines of authoritativeness. I don't know that it really matches up necessarily with some of those other letters in there.

[00:34:53:16] - **Lizzi**
I'm now going to be checking how trustworthy my kittens are when I search for them on Google Search.

[00:34:59:13] - **Elizabeth**
Yeah, I think that are they actually cute is the more important factor.

[00:35:02:23] - **Lizzi**
Technically cute.

[00:35:03:13] - **Elizabeth**
Let me know. Yes this is a really important assessment. Do that search, get back to me. Are we finding the cutest kittens of the internet? Because, if not, that is a huge problem. We've got to fix that.

[00:35:13:29] - **Lizzi**
I'm going to bubble it up to you.

[00:35:15:03] - **John**
And, if it's just one kitten, is that--

[00:35:17:07] - **Lizzi**
That's not enough kittens.

[00:35:17:28] - **Elizabeth**
That's not enough kittens.

[00:35:19:13] - **Lizzi**
Come on.

[00:35:19:14] - **John**
Okay.

[00:35:20:19] - **Elizabeth**
Can you even have too many cute kittens? I don't know.

[00:35:23:16] - **Lizzi**
Search query was "kittens," plural. So, if I get one kitten, not what I wanted.

[00:35:27:05] - **John**
I will ask my AI to generate more kitten pictures.

[00:35:31:10] - **Elizabeth**
That'll solve everything. Thank you. John.

[00:35:35:06] - **Lizzi**
All right. Well, it's been lovely having you here. I've learned a lot about how to search for kittens and the authoritativeness of kittens and how to say E-E-A-T out loud. And that's it for this episode. Next time on Search Off the Record, we'll be talking about rendering with engineer Zoe Clifford. Thank you, folks, for listening, and goodbye.

[00:35:53:24] - **John**
Goodbye.

[00:35:54:16] - **Elizabeth**
Goodbye.

[00:35:59:25] - **Lizzi**

We've been having fun with this podcast, and I hope you, the listener, have found it both entertaining and insightful too. Feel free to drop us a note on Twitter, @GoogleSearchC, or chat with us at one of the next events we go to if you have any thoughts. Of course, don't forget to like and subscribe. Thank you and goodbye.