



A Data Expert or a Group of Amateurs?

“Amateurs” Might Be a Little Harsh- But You Really Do Need Experts and to Know How to Find Them

“A Rook is the value of five pawns...”

Howard Staunton, English Chess Master

Similar to chess pieces, certain players on a technical team carry a lot of weight relative to the others. Attempts have even been made to quantify this differential.

According to studies carried out using computer programmer subjects in the 1960s by Sackman, Erikson, and Grant and published in the largest scientific and educational computing society journal at the time, the productivity increase from average programmers to the best is 10X on average, and can be up to 25X.

Sometimes referred to as the ***Tenfinity Factor***, this phenomenon exists beyond pure programmers, to all types of developers including data developers.

In an enterprise IT context, we often refer to a highly-skilled and productive developer (one with the *Tenfinity Factor*) with the common title of **expert**. In our experience, an expert will not only carry out effective and fast-paced work but will also boost an entire project team's ability to deliver better and faster results. This amazing productivity makes project stakeholders keen to identify experts and place them strategically.

There is a challenge, however: *identifying an expert*.

“Ensure they are not a jack of all trades.”

Identifying an Expert

In the field of law, experts are relevant as “expert witnesses” and clearly established methods exist to qualify them as experts in court. In the enterprise IT world, managers typically rely on resumes and interviews, but teasing out the critical factors to establish true and relevant expertise can be a challenge.

To help you with that barrier to finding the right talent, the following discussion helps you find important AND common characteristics typically associated with IT experts. We also present what to look for in picking the right team members for successfully executing on a data project, often involving strategic company assets that bring higher risks and rewards. These identifiers are valuable to project sponsors and managers who seek to identify experts for their most strategic projects.

Balanced Experience

How do you identify the experts so you can place them strategically? A good place to start is by identifying individuals with both broad and deep experience. There are many developers who can talk a *good textbook talk* about different ways to accomplish something, but relatively few who can tell you what works well and what doesn't across a wide range of technology and tool options, with broad exposure, based on actual experience. Once found, the next step is to ensure they are not a *jack of all trades*, citing exposure to strategic solutions, but cannot refer to actual experience, deep in the details and with a deep exposure to a given technology. As a leader, you will be interested in hearing the opinions of an expert with balanced experience, with both positive and negative experiences, so you can plan the best path for your long-term initiatives.

Certifications

Deep expertise can be spoken to but is often hard to assess, let alone ensure it is truly up to date. One answer to assess deep knowledge: look for credentials. Experts typically have relevant certifications for the work they are performing, including vendor certifications, which may be applicable to your environment or project particulars. Some technology veterans may view certifications as entry-level qualifiers, but it should not be taken for granted that technical certifications are updated continuously to certify that holders possess current and relevant skills. The attainment and ongoing efforts behind those certifications helps in a straightforward way to demonstrate ongoing competency and detailed knowledge of platforms, tools or methodologies.



Peer Recognition

Most experts are recognized as such by their peers. Peer recognition can be as simple as LinkedIn endorsements or can be assessed by a network of colleagues and followers if they are active thought leaders.

Evangelizers

Experts will typically have much to say and are not shy about sharing their opinions. They often write blogs, articles, white papers, and even books to share their view of best practices, advice, and what is truly state of the art. In group settings, experts take direction well and share pertinent knowledge openly, to the benefit of all. You will see them speaking at industry conferences, seminars and even local meet ups.

Mentors

One of the easiest ways to spot an expert is if they are coaching others. This is especially noted if people around them are improving as a result of their mentoring efforts. It can be interesting to ask in an interview what mentoring the practitioner has done. An expert will typically have much to say on the topic, from daily team-boosting habits to possibly even some relevant teaching experience. You can tease this out by asking how important mentoring and coaching is in their corporate or team experience.

With these common expert characteristics in mind, recall a highly-successful project. Were there any key members on the project team who were major contributors to the success of the project? How were these qualities demonstrated, and would you consider those key contributors to be experts?

Data Experts: Separating Them from the Rest

“A data professional who has paid their dues will remember the career experience and responsibilities that formed their eventual expertise.”

Particular qualities further distinguish data experts from all the others who might think they are experts. Successfully identifying them can help managers build the right teams to execute strategic data projects. In describing data expert qualities, one DBA told us: *“I feel like an ER doctor and my patient is the data platform.”*

This sentiment alludes to the fact that a careful approach is required so that costly mistakes are avoided. Indeed, a data professional who has paid their dues will remember the career experience and responsibilities that formed their eventual expertise, particularly that of **caution**. Data experts seek to be cautious above all else, experiencing or observing data disaster stories from their past.

True to the “measure twice, cut once” paradigm, a data expert will review their code multiple times, only to review once or twice more before execution. Contrary to the appearance of slowness, this deliberateness is a sign of high expertise. It can be a telling interview question to ask what data mishaps a candidate has seen or rectified in their experience, or what was the worst one. Follow-up questions about what they learned from that experience will shed light on how they have mastered the skill of caution.

A Real World Scenario

A manager walks past a developer who is staring on unbreakable focus on their screen, speaking quietly to their self and taking short notes in between long and thoughtful reading of the screen. Expecting to see a full screen of text, the manager glances at the screen only to find sparse lines of code and an *“Executing...”* indicator on the upper-left of the screen.



“What are you up to?” the manager asks. The developer replies that a data job was started and so far seems to be taking about as long as anticipated, but in case it starts to run long, there is a plan. The developer explains in tedious detail a backup plan. There is also a last resort plan which has some tradeoffs that are then enumerated, again in great detail. Lost in the maze of descriptions that make little sense, the manager points to his watch with an apologetic *gotta run* look and starts to walk away, only to hear the developer say, “looks like it’s wrapping up ahead of time.”

This story will sound familiar to those who have managed data experts. They are rigorous **planners** and tend to have thought about options well ahead of time. While it can be mind numbing at times to listen to their planning commentary, it’s also comforting to know that they have their bases covered. In an interview context, planning tendencies is hard to pull out just by talking, but one way to start is by asking for their own description of a large bulk operation that comes to mind, and what they did to plan it.

How can you tell if a developer is organized? A tempting answer is to look at their code. This is not always practical, nor is it necessarily the best way to see organizational skills of data experts, which tend to be highly organized. But a good way to test this is by looking at their system documentation. Data experts tend to be somewhere between adamant and obsessed with making sure data elements are highly organized within the data platform, and this often shows in their documentation. Their organizational methods include obsessively sizing field lengths for current and future state, creating rules for data storage that anticipate future possibilities, and robust segmenting or "containerization" to keep things of a kind together as much as possible. In an interview, a meaningful inquiry would be to ask how the candidate achieves minimal to zero rework on the data platform even as it evolves.

Wrapping It All Up

Quality carries a disproportionate value relative to cost when it comes to developers, especially on data projects. To ensure quality, it is critical to have one or more experts on the team. If this is your goal, hopefully you’ve found these expert characteristics to be informative.

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Perhaps they will prompt new interview questions or trigger thoughts about current personnel that could be mentored by an expert in another department or outside resources. Whatever path is taken to bring data expertise to your organization, IT leaders should be on a constant mission to procure experts, whether as company assets or as contractors.

Though true experts may come at a higher cost, the investment is worth the effort and seeing tremendous results. With experts on the team, stakeholders ensure solution stability by leveraging knowledge of those approaches and technologies that are appropriate for a given scenario. Remember, rarely is there one solution to a complex problem. You will achieve optimal development time (the Tenfinity Factor) and minimal future rework (misguided architecture in the absence of expertise).

Equally important, the expert investment will pay off via a multiplier effect, as the expert mentors other team members and helps you build a culture of excellent data performance to match the strategic goals of the organization.



At **Expert Analytics** we provide data experts and expert teams to carry out your strategic data initiatives expeditiously and cost-effectively. Our experts are experienced in a wide range of data tools and platforms and are highly credentialed with decades of successful client deliverables, advanced degrees, and certifications.

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