

Improving the Performance of Corporate Employees through the Use of Artificial Intelligence: The Case of Copilot Application

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Abstract. *In today's dynamic business landscape, the use of artificial intelligence becomes an important factor for companies to succeed. This research aims to see how Copilot application can help employees in their work environment. Microsoft Copilot application being an artificial intelligent tool which aims to be a teammate for each employee. There is a lot of research on how artificial intelligence can help users succeed in their work environment but there was still more to learn about how Copilot could help more specifically. Therefore, in order to find out more, we have used a survey and an interview in this scope. The survey was spread to 30 IT professionals and the interview was held with a support engineer to see how well Copilot worked for him. In the survey we looked at how Copilot could help people work faster, make better decisions, be more productive, and be happier at work. Whereas in the interview we looked at how useful Microsoft Copilot was in day to day activities in the workplace. For those interested to learn more about how Microsoft Copilot is changing the way we work, and how the Microsoft Copilot tool could help companies be more efficient, then the insights from this research provide an excellent foundation.*

Keywords: artificial intelligence, copilot application, employees' performance, technology integration, corporate

Introduction

The way businesses work has really been changed by using artificial intelligence, companies being more efficient. This research looked closely at one specific AI assistant called Microsoft Copilot and how it affects how work can be done differently. Even though there is a lot written about how these programs are used in different industries, there was not much that really looked at how Copilot specifically helps businesses overall. We wanted to figure out how much Copilot helps workers do tasks faster, make decisions, get more work done, and feel good about their work. We did a survey to ask workers about this in a structured way. Our main question was: How does Copilot help workers do tasks faster, make decisions, get more work done, and feel good about their work in a company?

The rest of what we did in this study goes like this. At first, we checked out what people wrote about artificial intelligence, how it works, and the problems that come with it. Afterwards, we looked at Copilot to see how it could help employees do better. We detailed how we did our study, like who we asked and how we looked at their answers. Finally, we talked about what we discovered from our research.

Understanding artificial intelligence:

Artificial Intelligence (AI) is a field revolutionizing our daily lives and work processes. At its core, AI involves creating computer systems capable of performing tasks that traditionally require human

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intelligence—such as visual perception, speech recognition, decision-making, and language translation (Yang & Aurisicchio, 2021). These systems are always learning and adjusting to new situations, handling more and more complex tasks. (Bommasani et al., 2022).

Ethical considerations are of a high importance when we speak about AI. It's something that companies need to think about carefully before they start using these kinds of tools. As AI systems advance, concerns arise regarding their societal impact, including issues related to privacy, security, and accountability (Engstrom, Ho, Sharkey, & Cuéllar, 2020). Researchers, developers, and policymakers must thoughtfully address these concerns by establishing guidelines and regulations to ensure responsible and ethical AI usage (Lehto, 2022).

The influence of AI on business performance:

AI is seen as a transformative technology in our time. It can have the power to greatly increase how much work people can do, which can really help companies succeed. A study found that every 1% increase in artificial intelligence penetration can lead to a 14.2% increase in total factor productivity (Zhang, Li, & Zhang, 2023). Another study from Stanford and MIT found that the use of AI tools like chatbots helped boost worker productivity at one tech company by 14% (Liu, 2023). In this way technology can decrease the amount of money spent, manage risks and have more productive employees that focus on meaningful tasks. AI can also provide valuable insights to the business, which is essential for a positive evolution of the business. One approach focuses on delivering results through teamwork, providing feedback that helps employees learn, grow, and deliver results, and rewarding contributions to business impact (Damioli et al., 2023).

Microsoft Copilot in corporate settings

Microsoft Copilot is an AI-powered productivity tool that integrates with Microsoft 365 apps to help users unleash their creativity, unlock productivity, and uplevel their skills. How does Microsoft Copilot work? In Figure 1, we can see that it combines the power of large language models (LLMs) with your data in Microsoft Graph and the Microsoft 365 apps to turn your words into the most powerful productivity tool on the planet. They aim to enhance productivity, creativity, and data accessibility while providing enterprise-grade data security and privacy features (Alithya, 2023).

In Figure 1, Copilot receives an input prompt from a user in an app, such as Word or PowerPoint. The prompt is then sent to the M365 Copilot Platform, where the orchestrator understands what the user is trying to do and evaluates what grounding data it needs to retrieve from the graph or web, and what plugins it might need to run to accomplish the task. Copilot then sends the modified prompt to the large language model, which generates a response. Also, we can see in Figure 1 the post-processing checks which ensures that the answers aligns with the user's intent and adheres to guidelines. As a business assistant and AI tool, Copilot can help people work better, be more efficient, and get better results. Copilot is flexible and is completely integrated with popular Microsoft apps like Teams, Outlook, Word, and Excel. For instance, you can create formulas in Excel, summarize emails in Outlook. Also, with Microsoft Copilot you can plan meetings, write drafts, and much more.

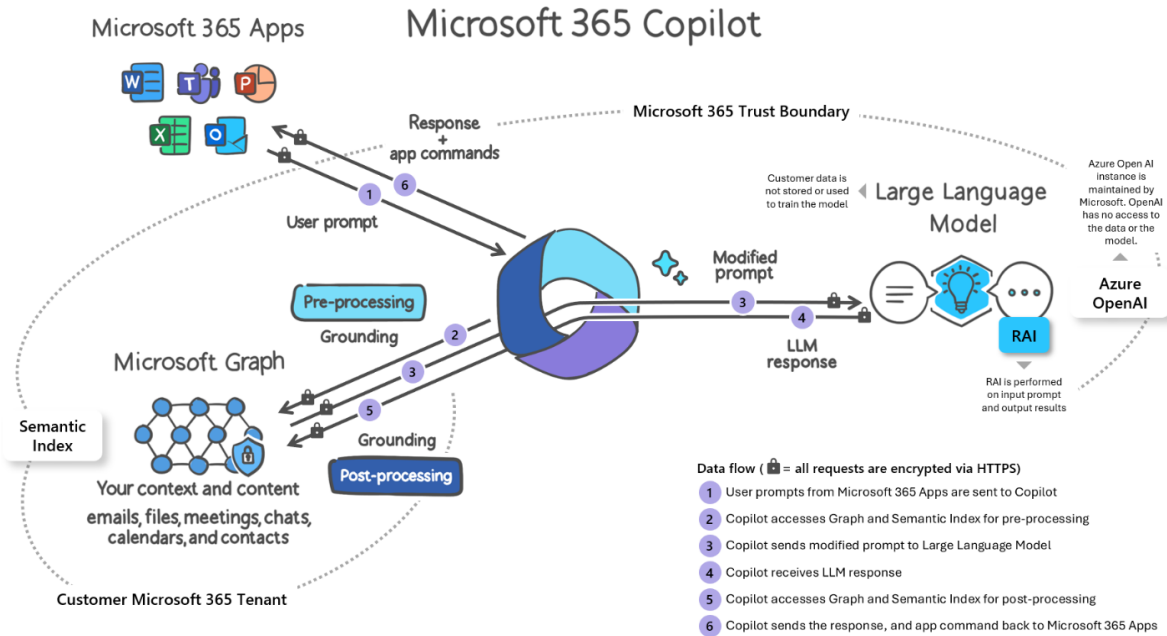


Figure 1. How Microsoft 365 Copilot works

Source: <https://www.varonis.com/blog/generative-ai-security>.

Microsoft Copilot can be a truly amazing tool if used properly. With adequate training it can help companies and individuals increase their efficiency in day to day work as well as become more in touch with the things that actually matter to them. Copilot leverages the complete integration with Microsoft 365 apps and can be used with ease as a smart business assistant that can help employees improve their quality of work and of life.

Methodology

In the context of this research, “Copilot” referred to an AI-driven assistant designed to streamline workflow processes in a corporate environment. Employee productivity encompassed tasks, decision-making, and overall satisfaction within the work context.

Qualitative and quantitative methods were used in this research to study the impact of Copilot AI on employee performance and satisfaction. The research methods focused to collect numerical data to assist in the analysis of the usage of Copilot as a tool. Then, the qualitative data that was gathered was used to provide insights into the effects of Copilot on employee performance.

For the quantitative data, a sample of 30 professionals who were engaged in business-related roles from IT companies was invited to participate in the survey. The participants were part of various departments and on different levels in their careers within the organization. The scope of having different participants was to capture more diverse perspectives and in order to reduce the likelihood of dishonest responses, the research ensured anonymity when gathering the self-reported data. The survey included questions about the task efficiency, decision-making processes, user satisfaction, and overall experiences with Copilot as a business assistant and AI tool. Unique codes were also used instead of personal names to maintain privacy.

The first variable was referred to as “Task Efficiency Rating with Copilot.” This variable measured individual’s perceived efficiency in completing tasks while utilizing Copilot, assessed on a Likert scale ranging from 1 to 5. The scale was designed to capture a subjective assessment of task efficiency, with 1 indicating “Not at all efficient” and 5 representing “Extremely efficient.” Respondents were asked to select the corresponding numerical value that best represented their perception of how efficiently they completed tasks when using Copilot.

The second variable was labeled as “Task Completion Speed Differential with Copilot.” This variable aimed to assess the perceived difference in task completion speed when utilizing Copilot compared to not using it. Respondents were presented with a scale where they could choose from the following options: Much slower, Slightly slower, No difference, Slightly faster, Much faster. This variable was made to gather qualitative insights into how Copilot affects the speed of task completion.

The third variable was named 'Copilot Satisfaction Level.' This variable measured the overall satisfaction of users with Copilot. It was measured using a five-point Likert scale, with options ranging from “Very Dissatisfied” to “Very Satisfied.” The choices aimed to capture user satisfaction levels, allowing respondents to indicate their level of satisfaction with Copilot.

The fourth variable was named 'Contributing Features to Copilot Satisfaction.' This variable was created to identify and understand the specific features or aspects of Copilot that users found satisfying or helpful.

The fifth variable was called 'Overall Productivity Impact with Copilot.' This variable evaluated the perceived change in users' overall productivity as a direct result of using Copilot. It was quantified on a scale with five options, and each representing a different level of productivity: significantly decreased, slightly decreased, no change, slightly increased, significantly increased.

The sixth variable was named “Tasks Enhanced by Copilot” and identified tasks or activities users found more productive with Copilot’s use. It was an open-ended question allowing for qualitative responses, capturing specific improvements in productivity attributed to Copilot.

The seventh variable was defined as "Task Completion Increase with Copilot" which measured the perceived change in the number of tasks users accomplished by the end of the workday when using Copilot.

The eighth variable was defined as "Influence of Copilot on Decision-Making." Influence of Copilot on Decision-Making was defined as the extent to which users perceived Copilot affecting their decision-making process. It used a five-point scale from 'Not at all' to 'Completely.'

The ninth variable was labeled as “Copilot-Influenced Decision Example.” This open-ended question prompted respondents to provide a specific example of a decision in which Copilot played a role.

The tenth variable was named “Confidence in Decisions with Copilot.” It assessed the level of confidence users had in the decisions made with Copilot’s assistance, utilizing a five-point scale from “Not confident” to “Extremely confident”

The eleventh variable was defined as "Overall Impact Rating of Copilot on Performance". This variable captured the participant's overall evaluation of Copilot's impact on their performance, including efficiency, satisfaction, productivity, and decision-making. It used a five-point scale from 'Negative impact' to 'Positive impact'.

The twelfth variable, “Likelihood of Recommending Copilot to Colleagues”. It used a five-point scale from 'Definitely not' to 'Definitely yes.' This variable provided insights into users' perceptions of Copilot's value and suitability for their colleagues.

The thirteenth variable was named “Additional Feedback on Copilot Experience”. This open-ended question encouraged respondents to share any additional thoughts, insights, or aspects of their experience with Copilot that they felt were important.

The last variable was called “Suggestions for Copilot Improvement”. This open-ended question asked people to offer specific suggestions or ideas for improving the effectiveness of Copilot. It aimed to gather qualitative insights into potential areas for improvement.

Likert scales were used for quantitative responses, allowing for numerical analysis of perceptions. Open-ended questions were included to gather qualitative insights and specific examples of Copilot's impact.

The survey link was sent electronically to the chosen 30 participants, emphasizing the importance of honest and thoughtful responses. Participants were assured of anonymity to encourage open feedback.

Quantitative analysis was analyzed using percentages to identify significant trends or differences in the responses from the 30 participants. Qualitative data from open-ended questions were thematically analyzed to extract key themes and insights.

For the qualitative research, we engaged in an interview with Alex, a seasoned support engineer and to reduce the possibility of dishonest answers, the interview ensured anonymity and confidentiality: fictional name was used. The criteria for selecting participants included their experience, familiarity with case management, and willingness to participate. During the interview, we engaged in a one to one conversation, allowing also room for follow-up questions. We delved into Alex’s experiences with manual case summaries, the challenges posed by context, and customer expectations. Copilot AI was introduced as a potential solution. We documented Alex’s feedback on Copilot’s usability, strengths, and limitations. The transcribed interview data underwent thematic analysis to identify recurring themes related to Copilot’s impact. Ethical considerations were taken into account to make sure participant confidentiality was maintained and research guidelines were followed.

Results and discussions

Based on the survey results most users had an experience, with Copilot. The data revealed that 86.67% of users were satisfied or very satisfied with Copilot as a tool showing that it met or even exceeded their expectations.

In Figure 2 it was observed that Copilot had an impact, on performance. A majority of users 77% noted an impact with an additional 14% reporting a positive impact. In contrast 6% experienced an slightly negative impact while 3% reported a neutral effect.

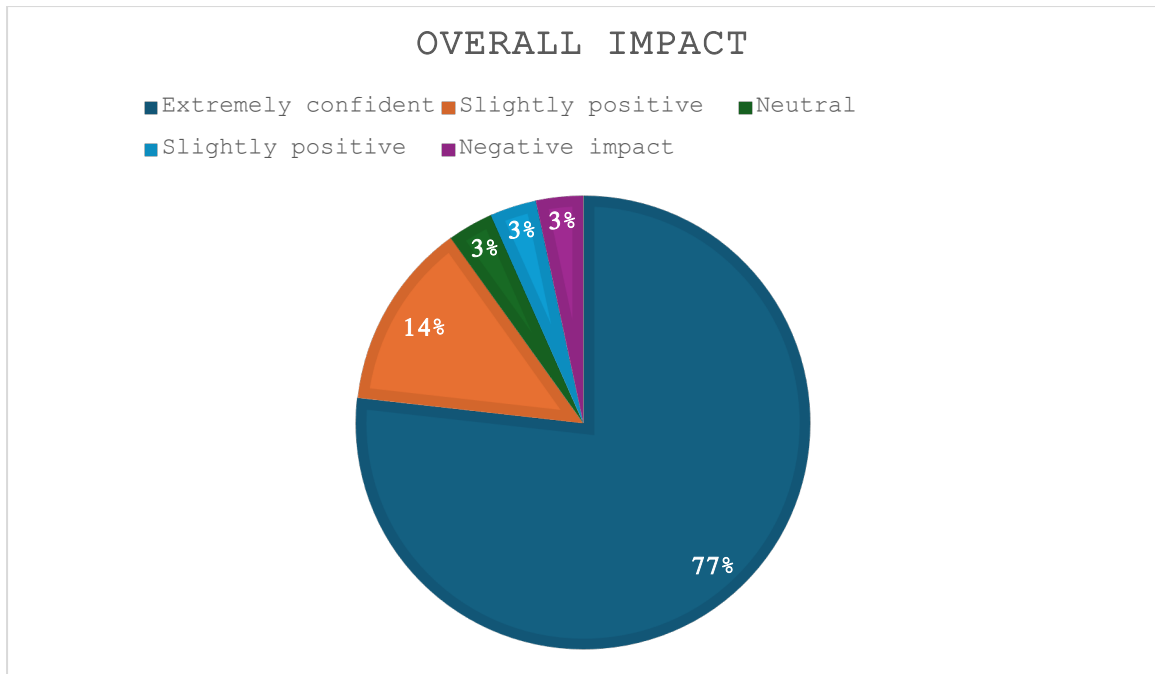


Figure 2. Copilot's overall impact on user performance

Source: Authors' own research.

In terms of task efficiency, 86.67% of users reported their task efficiency as either very or extremely efficient while utilizing Copilot. This shows that Copilot plays a significant role in improving task completion. The average task efficiency rating stood at 4.2 out of 5. Additionally, 91.67% of users experienced faster task completion with Copilot, and an impressive 96.5% expressed their intention to recommend Copilot to colleagues. Clearly, Copilot contributes to quicker task accomplishment. In terms of user satisfaction, the majority of respondents (86.67%) reported being either satisfied or very satisfied with Copilot as a tool.

A majority of respondents (73.3%) acknowledged that Copilot influenced their decision-making process, spanning from moderate to significant or complete influence. Furthermore, 86.7% of participants expressed high confidence—either very or extremely confident—in decisions made with Copilot's assistance.

The open-ended responses revealed specific features of Copilot that users found particularly helpful. These features encompass: Conversational Capabilities: Copilot's adeptness at adapting to different tones and responding in a friendly manner, creating more human-like interactions.

Rewriting Capabilities: Copilot's skill in enhancing text clarity and articulation, particularly in emails, feedback, and reports. Task Plan Generation: Copilot's ability to generate task plans using natural language input. Overall, users really appreciated Copilot's ability to communicate effectively, improve the clarity of text, and help with planning tasks. For more details, see Table 1, which contains specific responses about Copilot's features.

**Table 1. Impact of Copilot on Decision-Making and User Satisfaction:
Examples of Decisions and Contributing Features**

Examples of decisions where Copilot played a role	Examples of features used with Copilot that contribute to user satisfaction
Took notes and summarized feedback sessions	Being integrated with Word, Excel, PowerPoint and other internal platforms.
Prepared a better action plan based on the summary of the meeting created by Copilot	Creating and rewriting emails in other languages
Saved time in meetings where a lot of subjects were raised by providing a summary of each subject after the meeting	I have introduced clients feedback and issues into Copilot to help me find solutions to their problem
Made a PowerPoint presentation in just 30 minutes using Natural Language Processing to offer the client a SWOT analysis on why to choose a certain solution over another	In my role in middle management, I frequently leverage rewriting capabilities of Copilot to improve the clarity and articulation when communicating the tasks and achievements of my team.
Recommended a tool to a team based on their needs	As a sales representative I have used Copilot to generate the proper sales report based on the data which I have collected from the customer
Helped to decide which algorithm to choose from to create a decision-based system	Having used Copilot only to answer a few questions regarding the technologies that Microsoft can offer

Source: Authors' own research.

Also, we received responses to two open-ended questions about Copilot from the end of the survey. The first question asked about the user's experience with Copilot, and the responses varied from positive to negative. Some users had amazing experiences and found Copilot to be a great tool, while others had a horrible experience or found it to be unremarkable. Many people appreciated how well Copilot worked with Microsoft applications and how it improved their work, also they wanted Copilot to work better with other applications, to be more creative, and to be easier to use. Some people wanted Copilot to work with developer tools, Azure, and other tools. On the other side, others suggested training programs, sharing examples of how to use Copilot, and making it available on smartphones with Teams. Furthermore, from our conversation with the support engineer, we discovered how Microsoft Copilot changes the way the work is done.

The first finding is simplified case summaries: Copilot's automatic summaries significantly reduced the time the engineer spent on writing case notes manually. The summaries allowed the engineer to provide timely updates to customers which was helping to a more clear communication. The second finding is guidance: Copilot's queries based on personas assisted the engineer in handling different situations. By specifying various scenarios of customer, the engineer could ask relevant questions and get answers that suited the context. This feature enabled the engineer to resolve problems quicker and make smart decisions. The third finding is improved efficiency and satisfaction: the engineer observed increased efficiency in dealing with cases. Having quick access to key information allowed the problems to be solved faster. Customers were more satisfied due to the increase of accuracy in the updates provided.

Conclusion

Our aim was to look at how Microsoft Copilot AI assistant helped people at work and we found out that most people who used it were happy with it and got more work done. For instance, 86.67% of users reported their task efficiency as either very or extremely efficient while utilizing Copilot, and 91.67% of users experienced faster task completion with Copilot. Also, from the survey with our support engineer we extracted that features like automatic summaries and guidance made his work easier and more satisfying. In conclusion, the use of the Copilot application has a significant impact on employee performance. However, we encourage for further research to be conducted due to the small participants to the survey.

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Appendix

AI. Measurement scale of Employee Performance Survey - Measuring the Impact of Copilot Introduction

Thank you for participating in this survey. Please answer the following questions honestly.

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Section 0: Demographic questions

1. Role within the Organization:

- ☐ [] Executive Leadership
- ☐ [] Middle Management
- ☐ [] Frontline Employee
- ☐ [] Project Manager
- ☐ [] Team Leader
- ☐ [] Other (please specify)

2. Years of Experience in Current Position:

- ☐ [] Less than 1 year
- ☐ [] 1-3 years
- ☐ [] 4-7 years
- ☐ [] 8-10 years
- ☐ [] 11-15 years

3. Usage of Copilot:

Have you used Copilot AI as a business assistant in your daily tasks?

- ☐ [] Yes
- ☐ [] No

Section 1: Task Efficiency

4. On a scale of 1 to 5 (1 = Not at all efficient, 5 = Extremely efficient), how would you rate your task efficiency when using Copilot?

- a. ☐ [] 1 Not at all efficient
- b. ☐ [] 2 Slightly efficient
- c. ☐ [] 3 Moderately efficient
- d. ☐ [] 4 Very efficient
- e. ☐ [] 5 Extremely efficient

5. How quickly do you complete tasks with Copilot compared to without it(1=Much slower, 5= Much faster)?

- a. ☐ [] 1 Much slower
- b. ☐ [] 2 Slightly slower
- c. ☐ [] 3 No difference
- d. ☐ [] 4 Slightly faster
- e. ☐ [] 5 Much faster

Section 2: User Satisfaction

6. How satisfied are you with Copilot as a tool where (1= Very Dissatisfied, 5= Very Satisfied)?

- ☐ [] 1 Very Dissatisfied
- ☐ [] 2 Dissatisfied
- ☐ [] 3 Neutral

- ☐ 4 Satisfied
- ☐ 5 Very Satisfied

7. What specific features of Copilot contribute to your satisfaction? (Open-ended response)

Section 3: Employee Productivity

8. How has Copilot impacted your overall productivity where (1= Significantly decreased, 5= Significantly increased)?

- ☐ 1 Significantly decreased
- ☐ 2 Slightly decreased
- ☐ 3 No change
- ☐ 4 Slightly increased
- ☐ 5 Significantly increased

9. Which tasks or activities have become more productive with Copilot? (Open-ended response)

10. Have you accomplished more tasks at the end of the workday when using Copilot where (1= Not at all, 5 = Extremely)?

- ☐ 1 Not at all
- ☐ 2 Slightly
- ☐ 3 Moderately
- ☐ 4 Very
- ☐ 5 Extremely

Section 4: Decision-Making

11. To what extent does Copilot influence your decision-making process where (1 = Not at all, 5 = Completely)?

- ☐ 1 Not at all
- ☐ 2 Minimally
- ☐ 3 Moderately
- ☐ 4 Significantly
- ☐ 5 Completely

12. Share an example of a decision where Copilot played a role. (Open-ended response)

13. How confident are you in the decisions you make with Copilot's assistance where (1= Not confident, 5 = Extremely confident)??

- ☐ 1 Not confident
- ☐ 2 Somewhat confident
- ☐ 3 Moderately confident
- ☐ 4 Very confident
- ☐ 5 Extremely confident

Section 5: Overall Impact

14. Considering all aspects (efficiency, satisfaction, productivity, and decision-making), how would you rate Copilot's overall impact on your performance where (1= Negative impact, 5= Positive impact)?

- ☐ 1 Negative impact
- ☐ 2 Slightly negative
- ☐ 3 Neutral
- ☐ 4 Slightly positive
- ☐ 5 Positive impact

- **Would you recommend Copilot to your colleagues where (1= Definitely not, 5= Definitely yes)?**
- [] Definitely not
- [] Probably not
- [] Neutral
- [] Probably yes
- [] Definitely yes

Section 6: Additional Comments

15. Is there anything else you'd like to share about your experience with Copilot? (Open-ended response)

16. Any suggestions for improving Copilot's effectiveness? (Open-ended response)

Conclusion

Thank you for completing the survey!

II. Case Management: A Support Engineer's Journey with Copilot AI

Introduction: Alex, an experienced support engineer at Company X, faced the complexities of case management. He was busy with customer interactions, troubleshooting, and documentation every day. Writing a summary for each case he handled was a challenging job—until Copilot AI came along.

Interviewer (I): "Alex, thank you for participating in this interview. Can you describe your experience with case management before Copilot?"

Alex (A): "Certainly. Before Copilot, I spent hours manually compiling case notes. Each customer interaction involved sifting through a sea of information—emails, chat logs, and internal updates. I struggled to provide concise summaries while maintaining accuracy."

I: "What specific challenges did you face?"

A: "Two major challenges stood out:

1. Time-Consuming Summaries: Crafting detailed summaries influenced my productivity.
2. Contextual Blind Spots: Keeping track of historical context—previous interactions, relevant details—was like piecing together a puzzle blindfolded."

I: "How has Copilot AI impacted your workflow?"

A: "Copilot has been a game-changer! Now, I simply ask Copilot to summarize a case, and within seconds, I get a glimpse of what's been done so far. It's like having an efficient virtual assistant."

I: "Tell us about the persona feature in Copilot."

A: "Ah, the personas! I defined specific customer scenarios—installation issues, login failures, you name it. Copilot tailors its responses based on these personas. For instance:

- 'Copilot, you are a support engineer for platform x, what steps should I take to troubleshoot an installation issue for application x?'
 - 'Provide best practices for resolving login failures.'"
-

I: “And how has this impacted your problem-solving?”

A: “Dramatically! Copilot’s contextually relevant answers guide me. I no longer drown in case notes. Instead, I focus on solving the issue at hand. It’s liberating.”

I: “Results?”

A: "Three key outcomes:

1. Efficient Updates: I impress customers with timely, accurate summaries.
2. Swift Issue Resolution: Copilot’s guidance helps me find solutions faster.
3. Customer Satisfaction Boost: Consistent updates elevate our service quality."

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