**INTERVIEW QUESTIONS**

**Quantitative questions on the impact of AI on sustainability in the agricultural industry**

|  |  |  |  |
| --- | --- | --- | --- |
| Question | Description | Responses choices | Interviewee responses |
| 1. On a scale of 1 to 10, how would you rate the effectiveness of AI in reducing resource usage in agriculture? | This question asks the interviewee to rate the effectiveness of AI in reducing resource usage in agriculture on a scale of 1 to 5. | 1 = Strongly disagree,  2 = Disagree,  3 = Neutral,  4 = Agree,  5 = Strongly agree |  |
| 2. How many new job opportunities have been created as a direct result of the implementation of AI technologies in the agricultural sector? Please provide a numerical estimate. | This question asks the interviewee to provide a numerical estimate of the number of new job opportunities that have been created as a direct result of the implementation of AI technologies in the agricultural sector. | 1=0-1000,  2=1001-2000  3=2001-3000  4=3001-4000  5=4001-5000  6=5001-6000  7=6001-7000  8=7001-8000  9=8001-10000 |  |
| 3. How many hectares or acres of farmland have experienced improved sustainability outcomes through the use of AI? Please provide a numerical estimate. | This question asks the interviewee to provide a numerical estimate of the number of hectares or acres of farmland that have experienced improved sustainability outcomes through the use of AI. | 1=0-100000,  2=100001-200000  3=200001-300000  4=300001-400000  5=400001-500000  6=500001-600000  7=600001-700000  8=700001-800000  9=800001-1000000 |  |
| 4. Can you quantify the improvement in efficiency achieved through the use of AI in agricultural operations? For example, percentage reduction in labor or time required for specific tasks. | This question asks the interviewee to quantify the improvement in efficiency achieved through the use of AI in agricultural operations. For example, percentage reduction in labor or time required for specific tasks. | 1=0-10%,  2=11-20%,  3=21-30%,  4=31-40%,  5=41-50%,  6=51-60%,  7=61-70%,  8=71-80%,  9=81-100% |  |
| 5. Have you encountered any drawbacks or negative environmental impacts resulting from the use of AI in agriculture? If so, can you quantify them? | This question asks the interviewee to quantify any drawbacks or negative environmental impacts that they have encountered as a result of the use of AI in agriculture. | 1=0-10%,  2=11-20%,  3=21-30%,  4=31-40%,  5=41-50%,  6=51-60%,  7=61-70%,  8=71-80%,  9=81-100% |  |
| 6. What percentage of farmers or agricultural operations have successfully implemented AI technologies for sustainable agriculture? | This question asks the interviewee to provide a percentage estimate of the number of farmers or agricultural operations that have successfully implemented AI technologies for sustainable agriculture. | 1=0-10%,  2=11-20%,  3=21-30%,  4=31-40%,  5=41-50%,  6=51-60%,  7=61-70%,  8=71-80%,  9=81-100% |  |
| 7. What is the average return on investment (ROI) observed by farmers or agricultural organizations after implementing AI technologies for sustainable practices? Please express this as a percentage or monetary value. | This question asks the interviewee to express the average return on investment (ROI) observed by farmers or agricultural organizations after implementing AI technologies for sustainable practices as a percentage or monetary value. | 1=0-10%,  2=11-20%,  3=21-30%,  4=31-40%,  5=41-50%,  6=51-60%,  7=61-70%,  8=71-80%,  9=81-100% |  |
| 8. How many sensors or data collection devices have been deployed in agricultural settings to enable AI-driven decision-making? Please provide a quantitative measure. | This question asks the interviewee to provide a quantitative measure of the number of sensors or data collection devices that have been deployed in agricultural settings to enable AI-driven decision-making. | 1=0-10%,  2=11-20%,  3=21-30%,  4=31-40%,  5=41-50%,  6=51-60%,  7=61-70%,  8=71-80%,  9=81-100% |  |
| 9. How many ongoing research projects or initiatives are currently exploring the use of AI in sustainable agriculture? | This question asks the interviewee to provide a numerical estimate of the number of ongoing research projects or initiatives that are currently exploring the use of AI in sustainable agriculture. | 1=0-10%,  2=11-20%,  3=21-30%,  4=31-40%,  5=41-50%,  6=51-60%,  7=61-70%,  8=71-80%,  9=81-100% |  |
| 10. Based on your expertise, what percentage of future developments in AI and sustainability in agriculture do you foresee having a significant impact? | This question asks the interviewee to estimate, based on their expertise, what percentage of future developments in AI and sustainability in agriculture they foresee having a significant impact. | 1=0-10%,  2=11-20%,  3=21-30%,  4=31-40%,  5=41-50%,  6=51-60%,  7=61-70%,  8=71-80%,  9=81-100% |  |
| 11. How many small-scale or subsistence farmers have been able to adopt AI technologies for sustainable agriculture practices? Please provide a numerical estimate. | This question asks the interviewee to provide a numerical estimate of the number of small-scale or subsistence farmers who have been able to adopt AI technologies for sustainable agriculture practices. | 1=0-10%,  2=11-20%,  3=21-30%,  4=31-40%,  5=41-50%,  6=51-60%,  7=61-70%,  8=71-80%,  9=81-100% |  |
| 12. How many data points or records are collected and analyzed by AI systems in agriculture on a daily or yearly basis? Please provide a numerical estimate. | This question asks the interviewee to provide a numerical estimate of the number of data points or records that are collected and analyzed by AI systems in agriculture on a daily or yearly basis. | 1=0-10B,  2=11-20B,  3=21-30B,  4=31-40B,  5=41-50B,  6=51-60B,  7=61-70B,  8=71-80B,  9=81-100B |  |

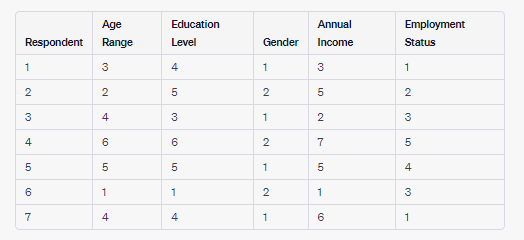


**Qualitative questions on the impact of AI on sustainability in the agricultural industry**

|  |  |  |
| --- | --- | --- |
| Question | Description | Interviewee responses |
| 1. How does artificial intelligence contribute to the sustainability of agriculture? | This question asks the interviewee to provide their opinion on how AI can contribute to the sustainability of agriculture. |  |
| 2. What specific applications of AI have you come across that help reduce the use of resources, such as water and pesticides, in agriculture? | This question asks the interviewee to provide specific examples of how AI can be used to reduce the use of resources in agriculture. |  |
| 3. How do stakeholders such as farmers, policymakers, and consumers perceive the role of AI in sustainable agriculture? | This question asks the interviewee to provide their insights into how different stakeholders perceive the role of AI in sustainable agriculture. |  |
| 4. What are the current trends or advancements in AI technology that have the potential to significantly impact sustainability in agriculture? | This question asks the interviewee to identify current trends or advancements in AI technology that have the potential to significantly impact sustainability in agriculture. |  |
| 5. Can you provide insights into any ongoing research or projects that explore the use of AI in sustainable agriculture? | This question asks the interviewee to provide insights into any ongoing research or projects that explore the use of AI in sustainable agriculture. |  |
| 6. Based on your knowledge and experience, what future developments do you foresee in the field of AI and sustainability in agriculture? | This question asks the interviewee to share their thoughts on what future developments they foresee in the field of AI and sustainability in agriculture. |  |
| 7. Is there any ethical concerns associated with the use of AI in agriculture? If so, what are they? | This question asks the interviewee to identify any ethical concerns that they have associated with the use of AI in agriculture. |  |
| 8. What potential challenges or barriers exist in implementing AI technologies for sustainable agriculture? | This question asks the interviewee to identify potential challenges or barriers that exist in implementing AI technologies for sustainable agriculture. |  |
| 9. Are there any specific regulations or policies that govern the use of AI in agriculture, especially concerning environmental and ethical aspects? | This question asks the interviewee to identify any specific regulations or policies that govern the use of AI in agriculture, especially concerning environmental and ethical aspects. |  |

**Demographic Interview Questions**

|  |  |
| --- | --- |
| **Question** | Responses choices |
| **1.** What is your age range? | 1=18-24,  2=25-34,  3=35-44,  4=45-54,  5=55-64,  6=65+ |
| **2.** What is the highest level of education you have completed? | 1=High school diploma/GED,  2=Some college,  3=Associate's degree,  4=Bachelor's degree,  5=Master's degree,  6=Doctorate degree |
| **3.** What is your gender? | 1=Male,  2=Female |
| **4.** What is your approximate annual household income? | 1=Less than $25,000,  2=$25,000-$50,000,  3=$50,000-$75,000,  4=$75,000-$100,000,  5=$100,000-$150,000,  6=$150,000-$200,000,  7=More than $200,000 |
| **5.** Which category best describes your employment status? | 1=Employed full-time,  2=Employed part-time,  3=Unemployed,  4=Self-employed,  5=Retired, Student |



*Thank you for your response.*