

Table 1 - Demographics

Participants	Age	Education Level	Work Experience	AI Familiarity
Brennan	23	Bachelor’s Degree	Working since the age of 16	Has heard of AI in larger cities.
Tony	41	High School	14 years of hospitality work	Has heard of AI in hotels.
Nick	23	Bachelor’s Degree	Working since the age of 15	Has heard of AI in hotels, but dislikes the concept.
Spencer		Bachelor’s Degree	2 years of hospitality work	No.
Mikayla	21	High School and some College	Working since the age of 14	“Yes and no, I think I read it, but didn’t pay much attention.”
Lauren	21	High School and some College	4 months of hospitality work	Has heard of AI in hotels.

Table 2 - Responses for Question 1

“Would having the ability to customize the light color or brightness of a guest room to a guest’s precise request be a good selling point for your hotel’s market?”

	Response	Analysis
Brennan Smith	“I don’t know if going and retrofitting all the rooms would be worth it, but if you were building a hotel, there’s no reason not to. I think the prices on those lights are just as affordable as the other lights. So yeah, I think that would be a huge selling point.”	This answer is notable because it addresses a common apprehension towards automating based on the price of smart equipment. For hotels being renovated or constructed from the ground up, however, outfitting each room with these bulbs would be more energy efficient and contribute to placing the operation at the forefront of smart establishments.

Nick Lange	“I honestly think it absolutely would, they would be able to say ‘they were able to do this for me, so I will definitely be coming back again because of this small gesture.’”	Mr. Lange points out that subtle details such as light customization can make a guest more likely to return, because they know that they will have better opportunities to tweak their experience to what they particularly enjoy.
Tony Blackburn	“I believe it would, because guests are always saying how dark the rooms are, so with more light, I would feel like they would be more happy with that.”	Mr. Blackburn mentions some of the feedback we often get from guests, and that having an option to increase brightness or change the lights would help with our guest reviews.
Spencer Bradshaw	“Yes, but I feel the cost would outweigh the benefits for already-built hotels. For newer ones, yes. And if you could change the color, hotels in locations like Vegas would be great.”	Mr. Bradshaw points out a valid counterargument for implementing smart lights in extant hotels, because there is a high upfront cost. But there is strong potential return on investment for existing locations and even more so for new properties.
Mikayla Cantu	“Our market is more of nostalgia, not really about technology, like I really don’t think people would care, some, like the younger people would, but mostly we have older alumni, so I don’t think they would really care.”	This is an interesting and pertinent observation; the demographic a hotel appeals to generally has to be younger to elicit the most eager response regarding new technology.
Lauren Restino	“I believe that yes, it would. I think every guest comes in with individual needs and any way that you can customize their experience is always a positive way.”	Ms. Restino’s observation of personalizing the guest’s stay is one of the most promising and hospitality-significant ways in which artificial intelligence can be implemented.

Conclusions from Question 1 - The first question that the interview opens with involves a simple and frequently overlooked advancement in technology, being smart lights. These bulbs can be adjusted in regards to hue and brightness, providing boundless possibilities for guest customization and tailoring to precisely what the individual desires. They are somewhat more costly than normal fluorescent bulbs, but they last for years and function very well as an aspect

of a room with integrated smart technology. Even among the interviewees with generally negative perceptions of automation, this feature is popular, showing that smart/AI enhanced lighting, photo-frames, or AC can collectively create a considerably more personalized experience.

Table 3 - Responses from Question 2

“Would your front desk crew benefit from having self-check-in kiosks in the lobby, regularly sanitized, to offer alternative ways to socially distance guests?”

	Response	Analysis
Brennan Smith	“Yes, especially on the weekends, I find myself not focusing so much on check-ins, but more talking to guests, explaining how to do things, where to go eat, so being able to alleviate or get rid of some of that traffic with check-ins would allow me to have more time to speak with guests, talk to them more, more in depth, give them more of a personal feel, what they want to do, instead of just trying to get them to where they’re going, to be able to help the next guest in line.”	Brennan touches on a notable benefit of incorporating automation into daily procedure, in which the check-in kiosk resolving the more tedious parts of getting a guest in the system, also allowing the guest service representative to dedicate more time to the guest and inform them of local attractions, places to eat, and general information about the hotel. This creates a more personable atmosphere for the guest, and keeps the GSR available to answer questions or help with other issues.
Nick Lange	“I honestly think that it would just not be the same, you just, hotels are about human [interaction]. Really getting that one-on-one with your guests, so I honestly feel like it would hurt the hotel industry because you’re not interacting with people. Because hospitality is basically the art of making humans feel welcome in their presence.”	Nick was understandably apprehensive towards the idea of having this automated form of check-ins on property, which highlights the common fear that using AI will displace the human workers. He is entirely correct in saying that hospitality is the art of humans making other humans comfortable and socialized; however, the conclusion of this thesis argues that AI will actually increase human interaction.
Tony Blackburn	“I also believe that that would help out a lot as well, with everything that we’re going through with COVID and	This is one of the more topical benefits of the advent of no-contact check-ins, keeping the kiosks sanitized would allow

	everything like that, that it would help out a lot.”	immuno-compromised guests to avoid the anxiety of interacting with the human workers if they felt at risk.
Spencer Bradshaw	“Yes, some guests that come often would love this. It would allow for lower labor.”	Frequent Graduate guests often get tired of the same check-in spiel with parking, housekeeping, & amenity information, so they would certainly benefit from a streamlined check-in kiosk.
Mikayla Cantu	“No on this one, too, just because some of our best reviews are about interacting with the front desk. So, I think people would actually be really upset if we made them go to that, or, like, if that was there for them. They would be like, ‘but we like talking to y’all!’ I don’t think that really benefits us and our market.”	In a perfect world, there would be a balance between human front desk workers and one or two self check-in kiosks, but some guests would still be disappointed in not having that same personal interaction.
Lauren Restino	“I think that that’s a tricky question, there’s definitely a lot of importance in having guest interaction, and that starts right from check-in, the second they walk in. So, I feel like having self check-in kiosks as the only option might kind of distance the guests from the hotel and the brand itself, but I do think that, again, having options to allow the flexibility for each guest is important.”	This response highlights the need for balancing both human and artificial elements. If an operation only has kiosks and no humans, that personal touch will be virtually non-existent, but performance can be greatly improved with at least one kiosk for every two employees. With this situation, the employees are less likely to be overburdened during busy weekends, and less social guests have a quicker, more convenient check-in option.

Conclusions from Question 2 - There is a considerable amount of apprehension regarding the check-in kiosks, because the participants generally agreed that the human element of check-in was one of the most important. This is entirely true, the first impression that a guest has can have a significant impact on the quality of their stay, and some guests would feel alienated by being required to use the kiosks. Fortunately, there is a stable equilibrium to be found when there are both humans and self-operated kiosks, so that some guests have the option

to bypass the small-talk and socializing of the normal check-in procedure, such as if they have a time-sensitive stay.

Table 4 - Responses from Question 3

“Would having simplistic user interface panels in guest rooms make it more convenient to receive and perform maintenance/housekeeping and food & beverage requests?”

	Response	Analysis
Brennan Smith	“I think yeah, this is like a no-brainer at this point, I think something like this should be implemented in every hotel. Um, because it can alleviate charges, you know, as soon as someone wants a water bottle, boom, it’s charged to the room, you don’t have to worry about the guest service representative not doing it. Um, it keeps ordered track of information, allows the guest to see what your property fully offers, in a nice, clean way. Yeah, there’s just so much you can do with that type of stuff, more towels, remote to the TV, remote to the lights, all from one central hub.”	The presence of a user interface screen in the guest rooms would lighten the burden of the front desk and housekeeping with taking room requests and questions. Using these panels, it would not displace any workers, but would make it easier for requests to be completed, and the guests would have the convenience of just tapping a touch screen and having their items dropped off: less contact, more convenient fulfillment. Installing the equipment would be an expensive investment, but it would garner more guest interest and justify increasing the rates.
Nick Lange	“I honestly think that that would be a really good part, because they will send us the request, we’ll be able to do what they need, and still have that human [interaction] with some help from technology.”	Even the more skeptical hotel workers find the panels to be very helpful for completing guest requests. It balances interaction and automation very well, because the human workers still take the items up to the room for the guests.
Tony Blackburn	“I believe it would as well!”	The general consensus among the workers is very positive regarding the user interfaces in each room.
Spencer Bradshaw	“Yes, we currently see many hotels developing [applications] for this. If we could start to have iPads in the room with easy UI, that would be amazing.”	There is already a growing market for interconnectivity with guest rooms, and ensuring user-friendliness would be very valuable for old and new properties alike.

Mikayla Cantu	“Yes, since with people on the phone it’s so hard to hear them sometimes, and it’s hard to understand.”	With the advent of these user interface screens in rooms, there would not be any language or communication barrier between the employees and guests.
Lauren Restino	“Yes, I definitely think that that is, like, here at the Graduate, we use the texting software which is really good, but this would just be taking that to the next level, which would be really helpful, and everything would be handled in real time.”	Ms. Restino makes an interesting point about the technology that the Graduate hotel already has, a texting platform that decreases call volume while making requests faster, but this in-room panel would be even more convenient for the guest than the texting feature.

Conclusions from Question 3 - The concept of installing a panel device in each room of a hotel property can seem very intimidating, but the wide variety of uses they offer tip the scale in their favor. Implementing these screens in each guest room or in suites would allow for a higher rate to charge, as well as increased guest satisfaction because of higher convenience. At the same time, offering these panels would not necessitate firing any workers, since this upgrade would only change the method and speed in which workers respond, allowing for faster completion of requests and less time spent responding to calls or requiring the guest to walk down to the desk for amenities.

Table 5 - Responses from Question 4

“Does your central reservation system already work with AI services that increase guest engagement, like Oaky or Upsell Guru which use the Opera PMS to send offers?”

	Response	Analysis
Brennan Smith	“Yes, uh, you actually may know a little more about this than I do, and how this works, but I know that we use Upsell Guru, to offer... upgrades to the room	Upsell Guru is most often triggered by third party reservations, and it allows the guests to bid on room upgrades, both increasing their satisfaction and providing

	for a certain price, if that room’s available.”	more revenue to the property. This is one of the best forms of AI we currently use.
Nick Lange	“Yes, yes we do.”	This service is so self-sufficient that the front desk workers barely have to interact with it, other than confirming the room for what Upsell Guru dictates for the guest.
Tony Blackburn	“I mean, we do have that?”	Most of the front desk workers are aware of Upsell Guru, but rarely have to interact with or monitor the service.
Spencer Bradshaw	“Yes.”	N/A
Mikayla Cantu	“Oh, yes!”	N/A
Lauren Restino	“Yes, we do here, so we already... Guests who book online can get upgraded through Upsell Guru.”	Currently, Upsell Guru only targets third party reservations for upgrades, but the service would be very helpful for direct bookings, as well.

Conclusions from Question 4 - Upsell Guru is just one example of the automated services that allow for guest upgrades, adding a sense of urgency and satisfaction in the bidding/auction styled messages that it sends to third party guests. Without any interference or input from the hotel workers, this program incentivizes people to reserve upgrades for their room, such as higher floors, suites, and other amenities, so it’s very simple to implement and manage.

Table 6 - Responses from Question 5

“Service robots are becoming very popular across the world, and employing them creates a point of interest for the guests. Do you think that your front desk workers would have more time for other duties with these assistants?”

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Brennan Smith	<p>“Sam, one of our housekeepers, here, is always having to clean rooms, do room moves, and a lot of the time she has to stop doing what she’s doing to be able to go fill a guest service request, whereas if we had a robot to just take them a towel or a water bottle, it would allow her to continue the job, instead of having to stop every ten minutes.”</p>	<p>This is one of the more promising aspects of incorporating robots into the hotel staff, because it will allow the most minor and tedious delivery requests to be completed without distracting housekeeping and the front desk from more nuanced tasks. When delivering small amenities and such, it is not necessarily vital to have a human perform such a simple task.</p>
Nick Lange	<p>I honestly feel like we would, but it still wouldn’t be the same. Because one of our things our hotel strives upon is just that interaction between the worker and the guest. So, I feel like with that technology in the way, it would just create more downtime and just, we still wouldn’t be able to do that stuff for the guest in person.</p>	<p>Some employees are strongly in favor of keeping exclusively human workers on the roster, but the hypothetical downtime Mr. Lange mentions would be very helpful for the workers to expend their efforts on other, more complicated job duties, rather than more menial tasks like making small item deliveries.</p>
Tony Blackburn	<p>“Yeah, definitely, like if we were here by ourselves, you know, that’s always a way that it can help.”</p>	<p>Mr. Blackburn referenced the benefit of having service robots available at the hotel, and mentioned how useful it would be when the employees are working alone. The front desk at Graduate Fayetteville is generally staffed by one person per shift on weekdays, along with one public attendant to handle guest requests.</p>
Spencer Bradshaw	<p>Yes and no, I think robots helping deliver stuff would be amazing, however, I know some guests still wish for human interaction for certain things.</p>	<p>These responses feature many of the same general worries about maintaining the human touch in service, and suggest that robots would be best performing only basic tasks, so that humans will still be majorly present in assisting guests.</p>
Mikayla Cantu	<p>“On a busy weekend, yes, but on non-busy weekends, it would kind of be just overkill. But even then, on a busy weekend, you can just hire more people.”</p>	<p>This taps into the main controversy of automation, being that the employees would be replaced by robots; however, the ideal would be to have robots on hand to decrease the workload for workers currently employed, without additional individuals on payroll.</p>

<p>Lauren Restino</p>	<p>Yes, I definitely believe that, while I understand the importance of guest interaction, like I talked about earlier, simple things like bringing towels can be done in several other ways, and can really just... Task completion is really important to me, so I feel like when I start something I really want to be able to finish it. But, at the same time, I want to deliver good service, so I find myself cutting myself off multiple times to bring things up to the room, when that can be served otherwise.</p>	<p>This response advocates for automation because it would allow for a more complex task-oriented work environment, so that humans can focus on guest-recovery and personal matters, while the robots would be geared towards delivering amenities and more tedious tasks. In theory, even having these robots absorb some housekeeping duties would not necessitate the housekeepers being terminated, instead giving them more time to complete more rigorous duties.</p>
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Conclusions from Question 5 - In line with Tony's opinion, having a service robot at the desk for check-ins or performing tasks for the guests would allow the human employees to focus more on front desk reports or paperwork and addressing guest concerns, or for the public attendants to manage cleaning and assisting the desk with more nuanced work.