



Candidate Technical Evaluation Report

Candidate details

Name	Location	Last Job	Profile
Jeff Edison	Longmont, Colorado	Intel	Embedded SW Developer

Interview Summary

Interviewer Name	Medium	Focus	Result	Recommended Action
Sue R	Phone	Soft Skills/Screen	NA	Meets Criteria
Harsh M	Phone	1 st Technical	7/10	Follow-up Technical Interview
Patrick C	Phone	Follow-up Technical	8/10	Client Forward

Interviews

Interviewer Name	Sue R
Medium	Phone
Focus	Soft Skills/Screen
Interview Details	<p>We started the conversation by talking about candidate's current job and his responsibilities. Then we discussed about the reason why he wanted to change. The candidate mentioned he has been in the same role for 3 years and there were not enough opportunities to broaden his skillset in the current company, so he was looking to explore other opportunities.</p> <p>Then we discussed about his ideal job and ideal team. He seemed to be very open and was mainly focused on learning new things and contributing to the success of the project. He preferred a smaller (4-6 members) team but was open for bigger teams if needed. At this point the candidate is not looking for leadership opportunities as he thinks he still has a lot to learn before being a confident leader.</p> <p>We discussed about any conflicts or challenges he encountered in the past and how did he manage those. He was articulate enough to explain one situation where candidate was feeling that his colleague was not giving him due credits and was showing candidate's ideas as his own. He acted very maturely and directly discussed and resolved the concern with his colleague without the situation being getting escalated. Other than that instance, he had shared good rapport with all his past managers and colleagues.</p>



Notes	I found the candidate to be an easy to work with personality. He may not be a very extrovert or outspoken, but sounded like a confident engineer who wouldn't shy away from raising his ideas or concerns. He was clearly able to articulate his thoughts. He is highly motivated to learn new skills and be an outstanding contributor to the team. Overall, I found him to be a good fit in a small to medium sized team.
Recommended Action	Meets Criteria

Interviewer Name	Harsh M
Medium	Phone
Focus	1 st Technical
Interview Details	<p>Candidate had quite a bit of experience in doing Embedded Programming for RTOS on his resume so we started the interview by talking about some basic concepts of embedded programming like mutex and interrupt handling and how it applied to his current project. Candidate was fluently able to explain different mutexes he had in his code and why they were used for. On interrupt handling, he could explain the flow of his IST which was triggered by an ISR but didn't have much visibility about how the actual interrupt was routed to his IST routine. He gave me an explanation on what he thought may be happening but wasn't sure exactly if that was the implemented way. But I found his concepts to be solid.</p> <p>Later I gave him a code snippet about a producer-consumer problem which had some race issues and asked him to identify the issue first and later fix it. Initially he went on to the wrong direction but with a little help he came back to right track and clearly saw and explain the problem. He added mutex at 2 places to fix the race condition.</p> <p>Then I asked him to design a timer functionality which will initiate a call back to one of his routines. He could design most part of the functionality except the final interaction with the timer hardware. He assumed there is already a timer interrupt which is registered. We discussed the missing piece and he was open to the suggestion and corrected his solution.</p> <p>Then I gave him a programming problem of finding the first non-repeated character in a string and asked him to use C/C++ to solve it. He came up with a solution quickly and coded it up after explaining me his approach. His solution was $O(n)$ complexity. I asked him to think for a $O(1)$ solution. With some help he could come up with the solution. Code was clean with most error case handled. There were a few minor issues which he could identify with some hints.</p>
Notes	Candidate's fundamentals on Computer Architecture and RTOS are reasonably solids. Some of the embedded/RTOS concepts were missing but that was mainly because of lack of exposure. On the coding side, I would rate this candidate as above average as his code was clean and he was proactively thinking on all the



	error cases. There were some instances where I had to give him some hints or pull him back in right direction. I would recommend a second technical interview to be absolutely sure.
Recommended Action	Follow-up Technical Interview

Interviewer Name	Patrick C
Medium	Phone
Focus	Follow-up Technical
Interview Details	<p>I planned to focus on the holes observed during the previous interview. I started the interview by asking him about his project on "Transport layer" which he did a good job explaining. I asked some specific questions on PCIe protocol which he knew the basics of. We moved on to next question of problem solving.</p> <p>I gave him a problem to write a routine which will tell if 2 rectangles are overlapping. He thought through for a while and came up with 4 conditions in which 2 rectangles wouldn't be overlapping. With some help he could quickly figure out that it was just 2 conditions and other 2 were just a mirror image. He described the algorithm which he would be using which I was satisfied with. Later he coded the problem using C++ and took care of all the boundary condition checking. His code was neat and readable. He was using optimal constructs in his code. Later I took a few test co-ordinates and asked him to run me through his code. His code was correct for my 2 set of inputs. There was one case of adjacent rectangles which was not handled correctly but he was able to figure it out and fix it. At this point I was satisfied about his coding and problem-solving skills.</p> <p>Next, we talked about Caches. I asked him different types of caches and how does that impact an Embedded Software developer when developing his code. He knew basics of caches and gave me textbook answer for the same. He showed good understanding on how the cache architecture impacts software/firmware development.</p>
Notes	Candidate possesses strong technical skills. His fundamentals are strong about embedded programming and computer architecture. He is open to take feedback and can think logically when presented with a difficult problem. Overall a good technical prospect.
Recommended Action	Client Forward