Bootlin training course evaluation

10 réponses

Publier les données analytiques

Overall rating of the course

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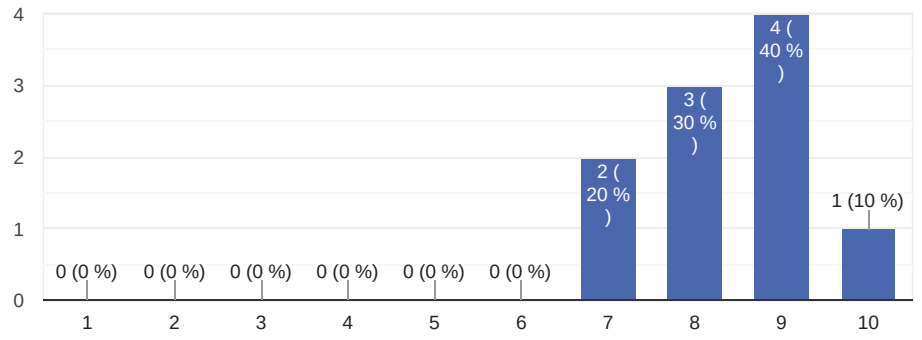
10 réponses



Comments and suggestions

3 réponses

The course was very well put together and it covered a lot more details than I had expected. The only possible improvement is the scheduling.

Requires more interaction (somewhat too passive, one-way learning), but otherwise good structure and coverage. Also good examples/demos.

Really nice to get a full overview of the stack. A bit too kernel heavy for me personally, since I rarely interact with that part of the stack in my work

How useful were the lectures?

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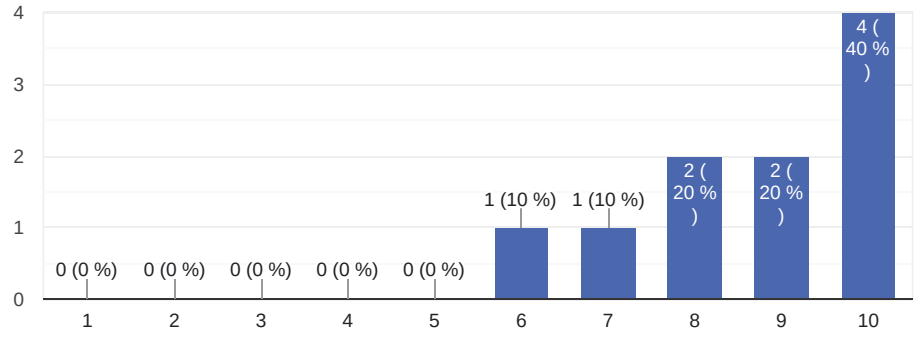
10 réponses



Comments and suggestions

Une réponse

Had requested this course when I needed it the most. But unfortunately it happened 8 months later.

How useful were the practical demos?

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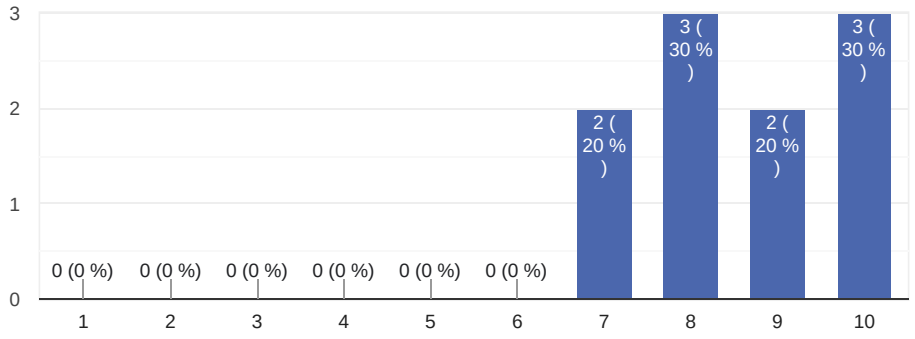
10 réponses



Comments and suggestions

3 réponses

They were useful but sometimes had to go a bit too fast, would have been fun to hear the speaker output when testing on some of the demos.

Maybe add parts where participant need to try/think themselves. It doesn't have to be 'real' coding but quick quizes between chapters for example, will be good. So we have chance / forced to process/retrieve information that we just received.

I liked the way that the trainer dived into header files and data sheets, to demonstrate the connection between code (and device tree) and the underlying specifications and hardware.

How would you rate the overall organization of the course?

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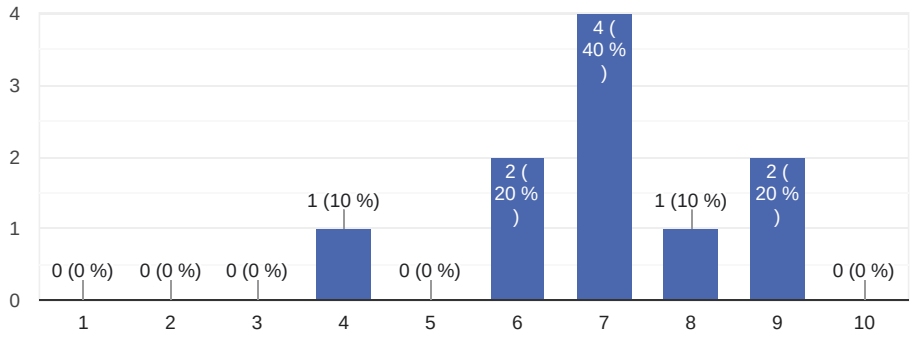
10 réponses



Comments and suggestions

7 réponses

Very good information and materials, but the course duration was a bit too short so we didn't have enough time for all topics

The material covered in the course could have easily filled 20+ hours considering the amount of practical demos, Q&A, etc. We had to skip breaks and go overtime every single session and we still did not manage to cover all of the prepared material. I found this very uncomfortable and I would have absorbed the material better without this time pressure.

If you know you have 4 hours worth of material then please schedule 5 hours including breaks, or reduce the amount of material for each session so that it fits the allocated time.

Maybe add a bit more practical demos, since there was a lot of information to process without actually using it

Later parts like gstreamer and pipewire feels a bit rushed, maybe because we lose time in the first day due to misaligned schedule.

I feel like the course page with all the useful links could have been more prominent. Very good to have a single link with all course related information. Pacing felt great in the beginning but got kind of rushed toward the end. Felt like I missed out on some useful demos that we just didn't have time for

I can't comment on the registration process as I was not involved. I felt that while there certainly were a lot of occasions to ask questions, the trainer should have waited a bit longer after asking the question 'are there any questions', since, being an online course, it can take time for people to react and it's not always obvious from just looking at the streamed images if someone immediately has something to say.

I would appreciate if more of the time could be spent on the user-space layers. The pipe-wire part was interesting, but I think it could be expanded a bit more. Also, I was a bit sad that we had to skip the GStreamer part

How would you rate the trainer?

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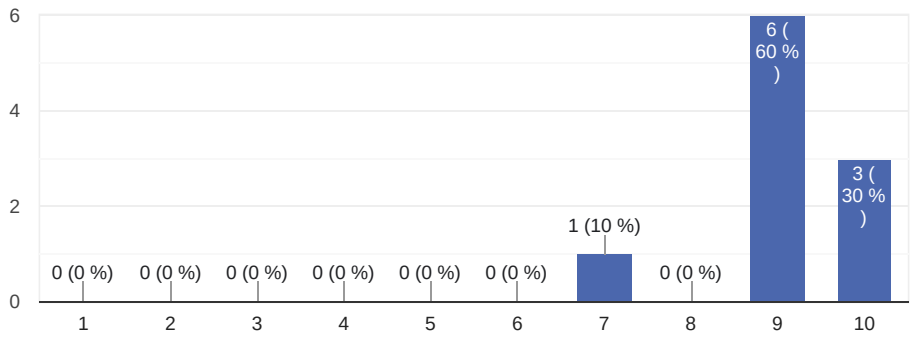
10 réponses



Comments and suggestions

3 réponses

Very knowledgeable, friendly and helpful.

Very knowledgeable, good pacing and great at keeping the lectures at a reasonable depth. Good at connecting questions back to previous lecture material and giving in-depth answers that felt very relevant.

I thought the trainer certainly knew his stuff and was good at presenting it. I also like when the trainer has information and remarks derived from practical experience, as it is the key difference between a course like this and just reading online documentation.

How did the course meet your learning objectives?

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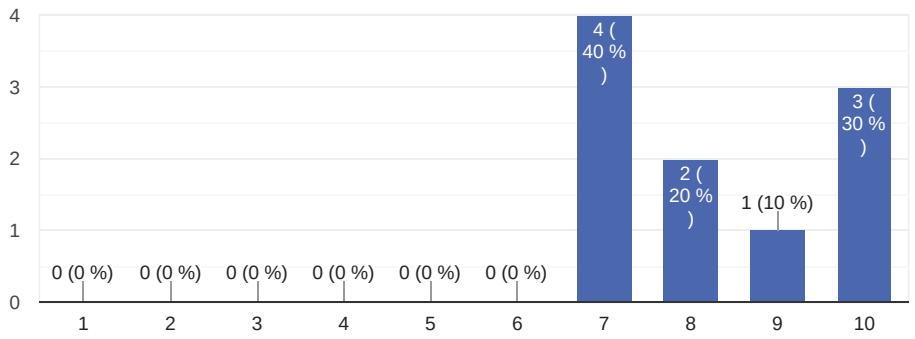
10 réponses



Comments and suggestions

5 réponses

The course gave me a good overview of audio in Linux, will have to go through the materials myself as there was a lot of new information.

Personally, a little too heavy on drivers while userspace stuff felt somewhat rushed. I suppose it's hard to have the right balance with a mixed crowd.

Good to fill the holes in my knowledge, although somewhat hard to get interested/focus on things that i never work/touch before (but this is general to any kind of course).

Having worked with Linux low level audio for some time, I was hoping the course would fill in some of the blanks I have (due to practical experience only with the products I've worked with). To a large degree this was true, so I'm happy for that, but I felt there should have been even more to dive into, such as DPCM. At the same time I was talking to a colleague who attended the course who had not worked with low level audio before, so for him there was a lot of new material. So all in all I think it was probably well balanced given the variation in experience level of the attendees.

I think the information put out there was really good. But for me as an individual developer, I was mostly attending the course for learning pipewire.

What part(s) of the course did you like most?

7 réponses

The course material is really good. I think it will be useful for me even in the future.

The fundamentals of DAI and implementation of drivers.

The overview of the ASoC structure, since the kernel is a bit overwhelming

First and third day.

hand-on demo

I found the material on kernel/user space communication and how they're connected to be very engaging and interesting.

The parts which I have the most limited knowledge about: DAPM and Pipewire.

What part(s) of the course did you like least?

4 réponses

I think the course would benefit from some participation by the attendands (exercise, demo or something similar)

Last day

A bit too heavy on the nitty gritty of how drivers are built

Nothing really, there were interesting bits all the time.

What reasons prompted you to choose a Bootlin course?

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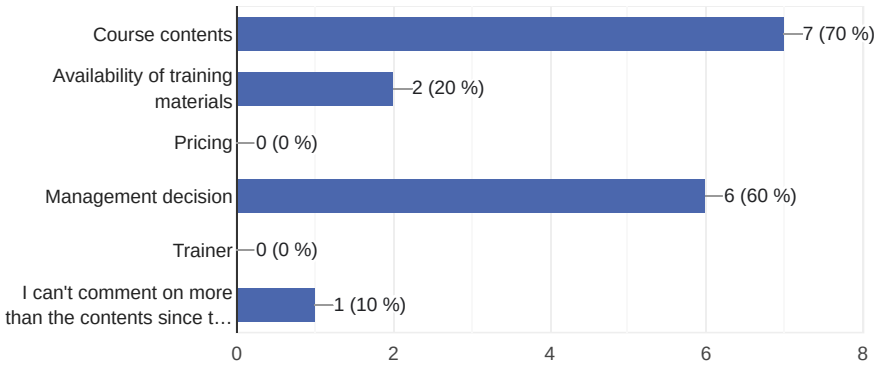
10 réponses



Comments

2 réponses

More interactivity and hands-on demos would be beneficial, though challenging in a 16-hour course. Breaks every 45 minutes would be appreciated. Overall happy with the course!

I was not completely satisfied with the quiz, as I feel some of the questions are a bit diffuse. For instance, "routing" is a general term for me, whereas "DAPM routing" specifically refers to the connection of DAPM widgets. As for 'interfaces available on a CODEC', it depends, the question should be 'interfaces that are always available on a CODEC' (digital audio)" or "interfaces that may be available on a CODEC (digital audio, control, GPIO [since there may be GPIO pins on the codec that can be exposed via the gpio framework] and system clock). I don't think of a 'DAI driver' as describing the capabilities of a CODEC just because there is a struct called snd_soc_dai_driver, for me a 'DAI driver' is the code itself. And I'm still not sure what plugin can be used to 'multiplex' access to a PCM, which for me would imply some real time control that can switch between slaves (we actually devised a 'mux' plugin here at Axis to handle this case). The way I see it, multi is used for routing, dshare is used for splitting a slave to multiple clients, dsnoop is so more than one client can connect to a slave for capture and dmix is the same for playback. And I don't think we mentioned a 'sound server', which seems to be an ancient way of implementing sharing and snooping. But the important part of the course is of course not the quiz but the material itself and that was excellent.

Further training needs?

Une réponse

More complex Linux audio configuration: Using Dynamic PCM, Sound open firmware (SOF), graph examples with multiple codecs and CPU DAIs. Discussion of various DMA modes (batch etc) and also DMA implementations to match the requirements for Linux audio.