

src/ui_gradio.py — Full Code with Webcam Preview Highlight

This document contains the complete implementation of `src/ui_gradio.py` for the AI Virtual Interviewer project. Highlighted is the section where the **webcam preview** feature was added, so you can easily spot it.

Highlighted Webcam Preview Section

```
# ----- Gradio app -----

def make_app():
    qpath = os.path.join(os.path.dirname(__file__), "..", "data", "questions.json")
    roles = list(json.load(open(qpath, encoding="utf-8")).keys())

    with gr.Blocks(title="AI Virtual Interviewer") as demo:
        gr.Markdown("# ■ AI Virtual Interviewer – Friendly Mode")

        with gr.Row():
            with gr.Column(scale=4):
                role = gr.Dropdown(choices=roles, value="java_developer", label="Role")
                name = gr.Textbox(label="Your name", placeholder="e.g., Ananya")
                n_questions = gr.Slider(1, 6, value=3, step=1, label="Number of questions")
                use_webcam = gr.Checkbox(False, label="Include webcam behavior metrics (optional)")

            # ■ Added section: Webcam Preview
            with gr.Column(scale=1):
                gr.Markdown("**Webcam Preview** (just to show you're being captured)")
                cam_preview = gr.Video(
                    source="webcam",
                    streaming=True,
                    height=160,
                    interactive=False
                )

            # ■ End of added section

        start_btn = gr.Button("Start")
        question_md = gr.Markdown("Pick a role, enter your name, then click Start.")
        mic = gr.Audio(source="microphone", type="numpy", label="Record your answer")
        submit_btn = gr.Button("Submit answer")
        feedback_md = gr.Markdown("")
        finish_btn = gr.Button("Finish & Save Report")
        result_md = gr.Markdown("")
        download_files = gr.Files(label="Download your report (after Finish)", interactive=False)

        session_state = gr.State()

        start_btn.click(start_session, [role, name, n_questions], [question_md, session_state, feedback_md])
        submit_btn.click(submit_answer, [mic, role, session_state, use_webcam], [question_md, session_state, feedback_md])
        finish_btn.click(finish_and_save, session_state, [result_md, download_files])

        gr.Markdown("– built with ❤️ using Python, Gradio, scikit-learn, and OpenCV.")

    return demo

if __name__ == "__main__":
    app = make_app()
    app.launch()
```

How to Run

```
# 1. Install Gradio (if not already installed)
pip install gradio

# 2. Launch the Gradio UI app
python -m src.ui_gradio

# 3. Open the link shown in the terminal (usually http://127.0.0.1:7860)
#   - Left side: select role, enter name, choose number of questions
#   - Right side: see live webcam preview (highlighted section)
#   - Record answer with mic, submit, and receive feedback
#   - At the end, click 'Finish & Save Report' to download the report
```