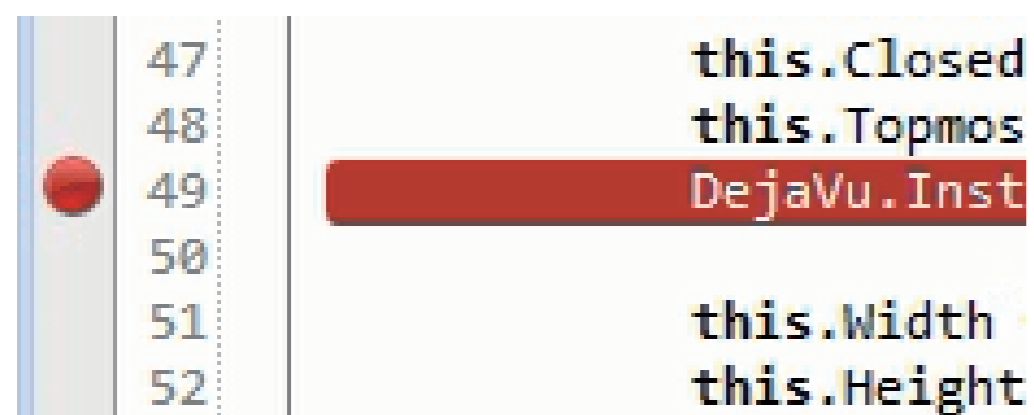


# DejaVu: Integrated Support for Developing Interactive Camera-based Programs

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## BACKGROUND

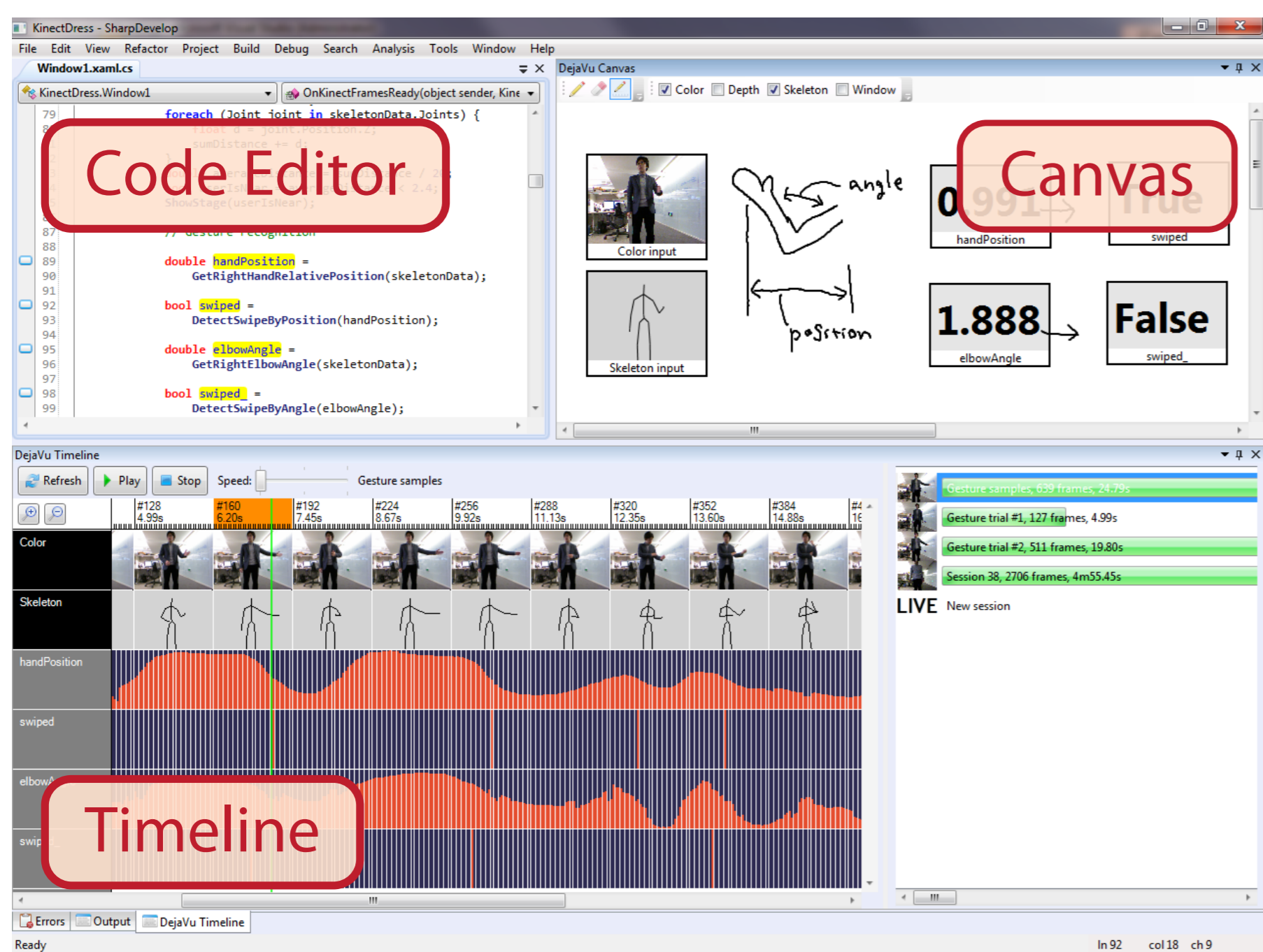


**Camera-based programs are getting popular** with affordable hardware and useful software libraries.

**Current IDEs do not provide sufficient support** and programmers have to test/debug programs by...

- Breakpoint, Console.Write()
- Custom visualization code

## DEJAVU



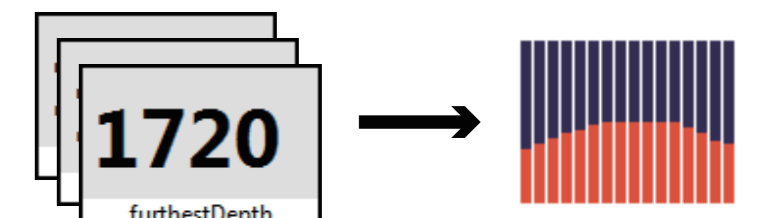
**We made an enhancement to an IDE for interactive camera-based programs.**

### Distinctive Challenges

**A) Various visual data:**



**B) Continuous processing:**



**C) Non-reproducible input:**

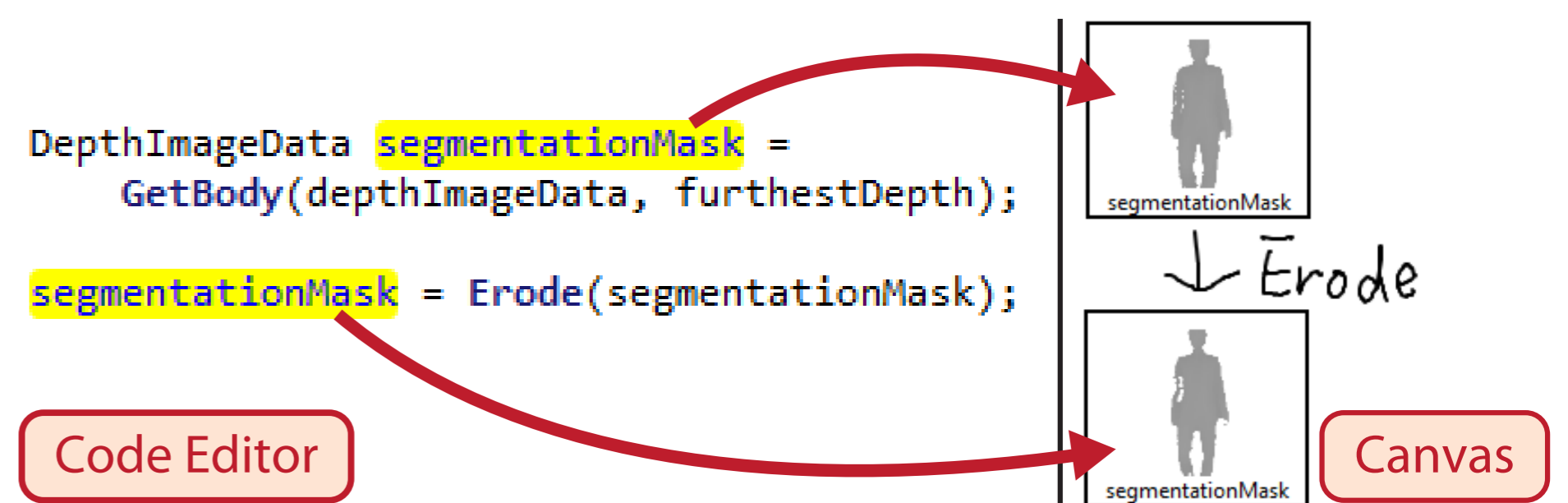


## CANVAS

Interface to sketch and visualize "now"

Solution to A,B

- **Sketch anything to memorize** what the program is doing.
- **Drag and drop variables** from the code editor to visualize them.

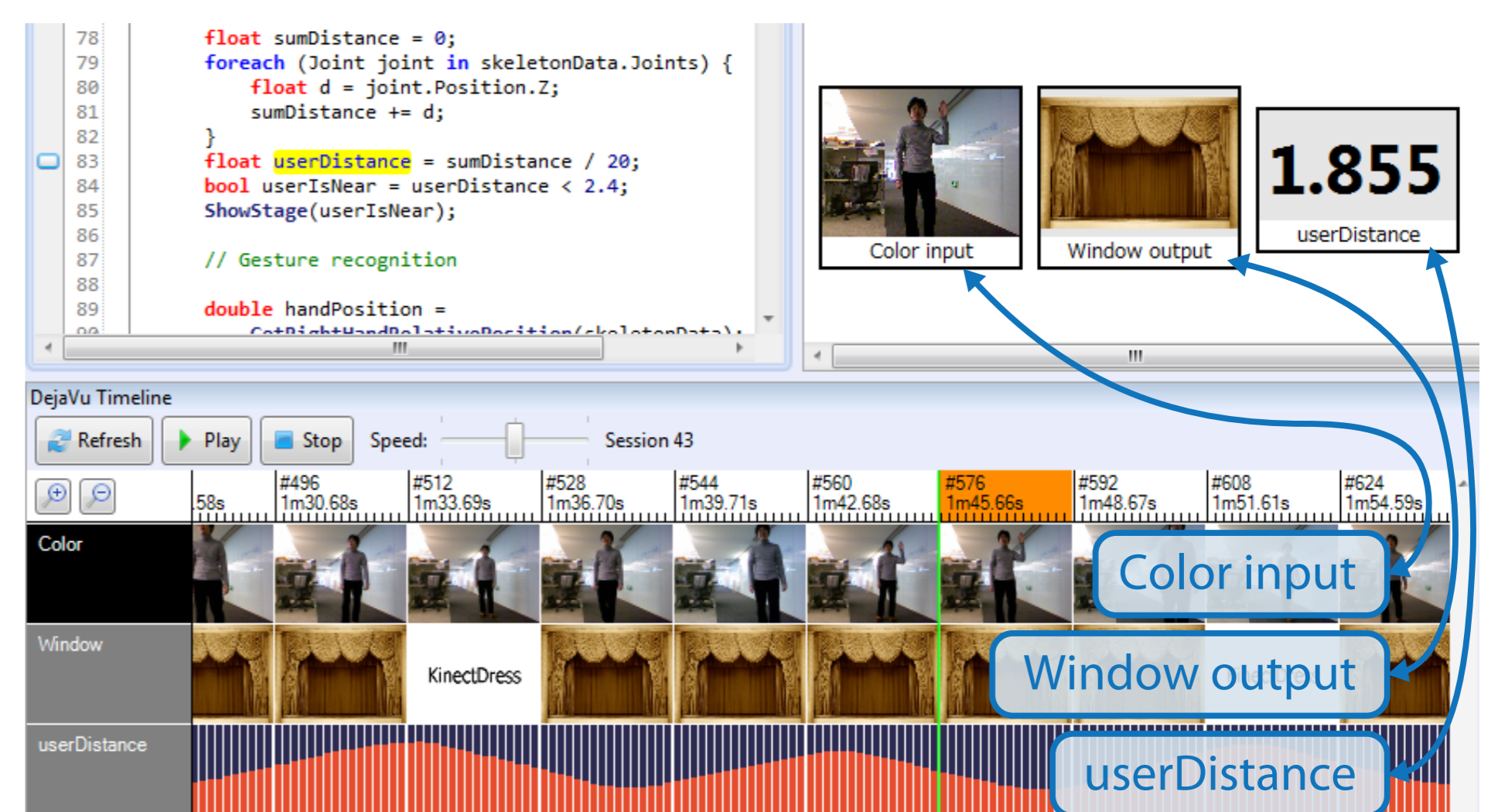


## TIMELINE

Interface to look into and replay "the history"

Solution to B,C

- **See the history of data** which has been shown in the canvas. (inputs, outputs, intermediate results)
- **Play a new session, replay or refresh a recorded session.**



## IMPLEMENTATION

**SharpDevelop (OSS IDE) + extension**

- 1) Thin wrapper of Kinect SDK
- 2) Code rewrite before/after compilation



**2) Original:** double a = func();  
**Rewritten:** double a = (Double)(IDE.track(func(),17));