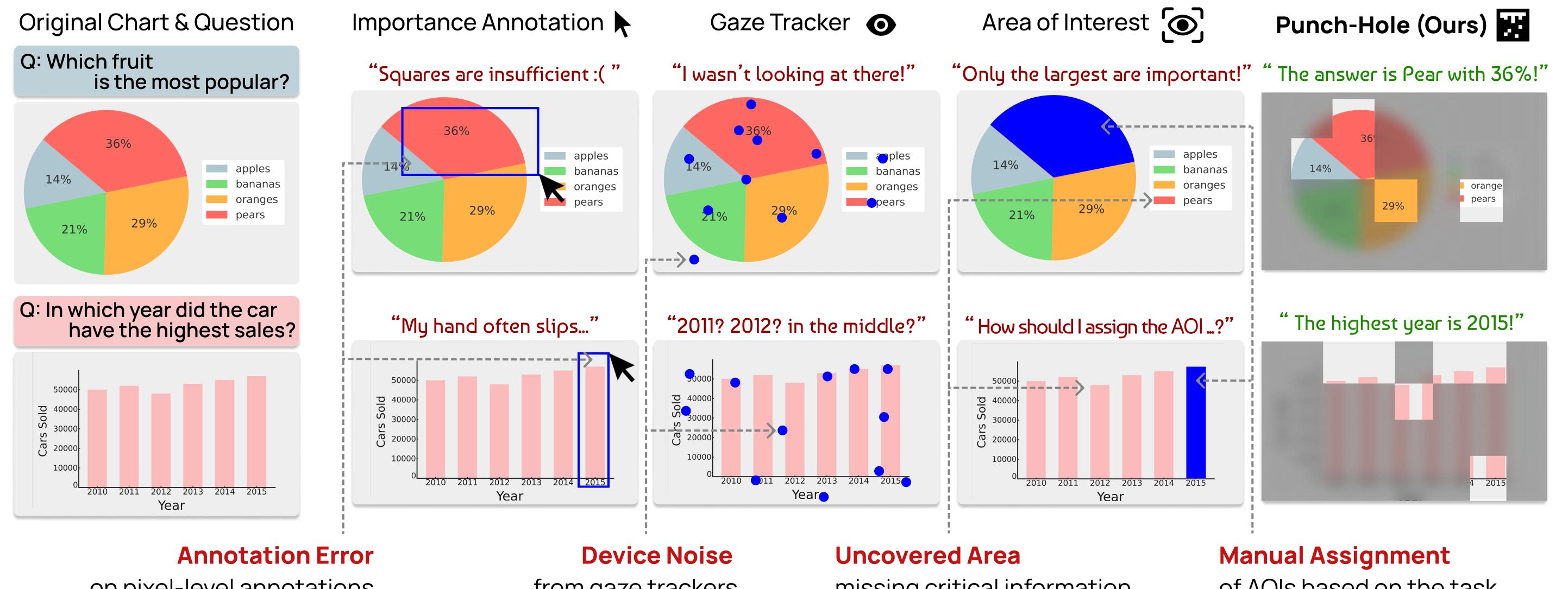
# **Efficiently Crowdsourcing** Visual Importance with **Punch-Hole** Annotation

Minsuk Chang, Soohyun Lee, Aeri Cho, Hyeon Jeon, Seokhyeon Park, Cindy Xiong Bearfield, Jinwook Seo



### **Extracting Visual Importance with Various Methods**



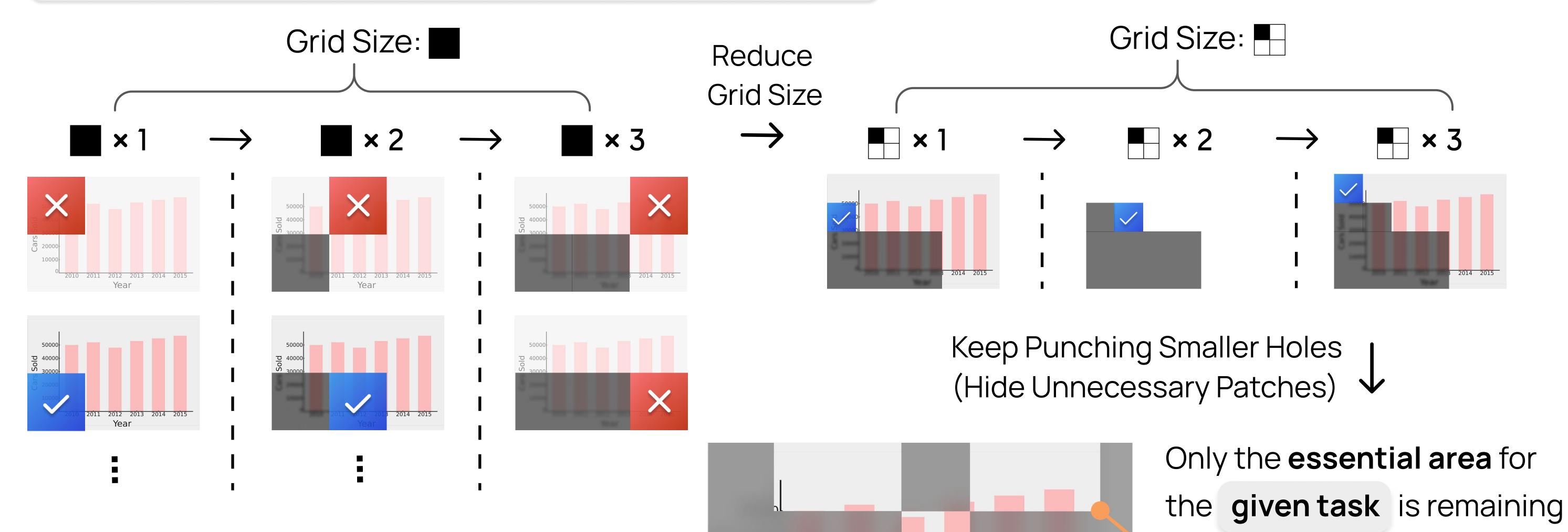
on pixel-level annotations  $\rightarrow$  Personal variance

from gaze trackers  $\rightarrow$  Post-processing required missing critical information ex: comparison, legend, etc of AOIs based on the task  $\rightarrow$  Additional human labor

# **Process of Punch-Hole Annotation**

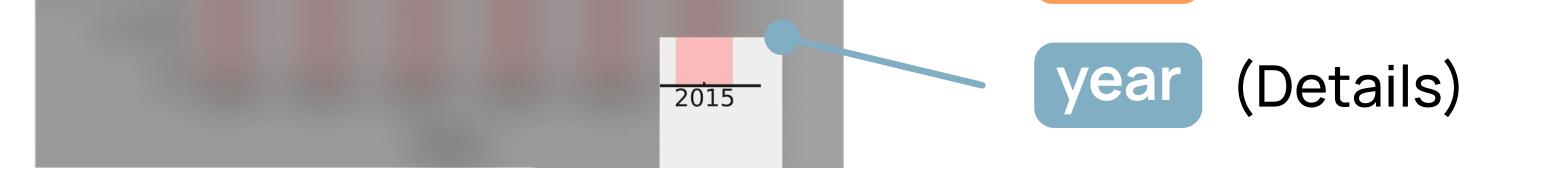
Task: In which year was the car sold the most ?





Hide patches and ask people whether the hidden ones are





## **Advantages & Contribution**



Show-And-Verify

All patches are considered important

**Coverage of Essential Areas** 

Easy to merge collected responses

**Discrete Responses** 

Required Participants





(Comparison)

Dichotomous answers w/o drawing

mos

Crowdsourcing Accessibility