Task Artisan: Flexible Authoring and Manipulation of Task-specific Interactive Widgets via Sketch and Voice

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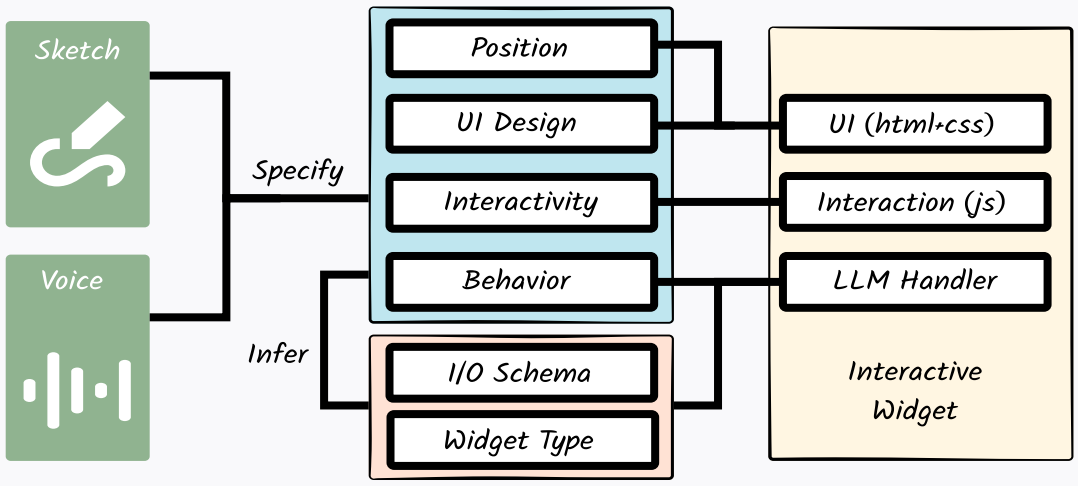
Motivation

- Knowledge work tasks, such as analysis, are open-ended and non-linear, which require people to weave together many separate tools.
- Current code generation agents such as Claude Artifact empower users to create GUI tools yet these generated artifacts are self-contained and cannot fluidly bind to evolving data.
- We aim to enable users to freely and easily author **task-specific interoperable GUI widgets** in situ by free-hand sketches and voice.

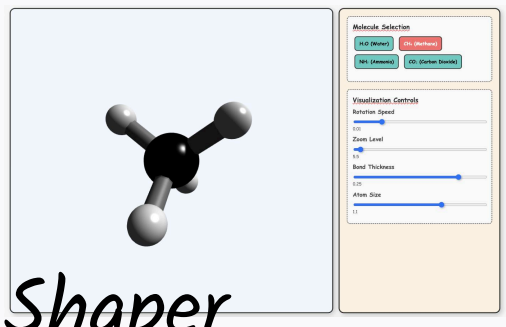
Pipeline



Our system transform the sketch and voice input to a widget specification that describes the visual and behavioral aspects of the target widget.

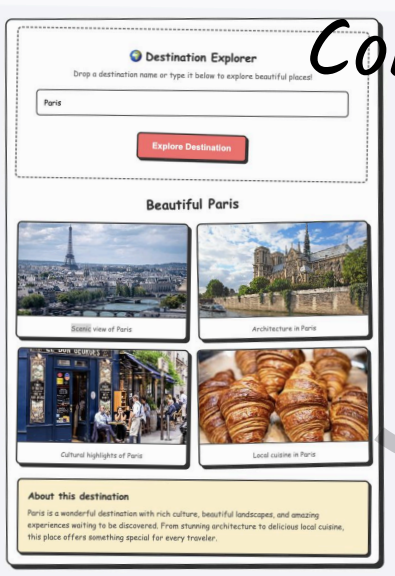
Interactions

Shaper widgets creates summarize, highlight or expand the input content



Shaper

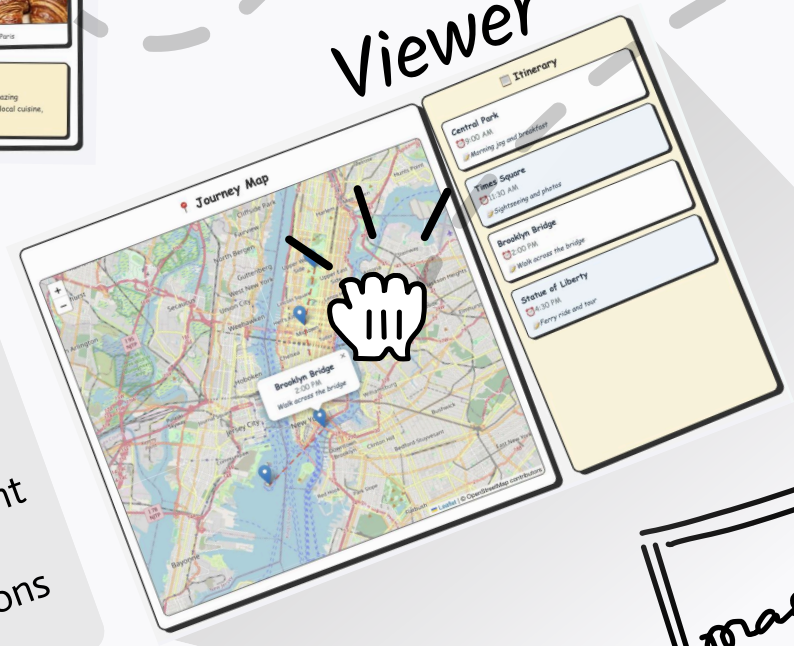
Composer



Composer widgets creates new content based on user provided context and parameters

Task Artisan is an infinite canvas where users can freely arrange **content** (information objects that are relevant to the work) and **widgets** (interactive GUI objects that users author and can interact with content.)

Viewer



Viewer widgets restructure or reformat existing content into new representations

"So here I want to see all the stops in our New York trip on a map... "

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