

# University of Stuttgart

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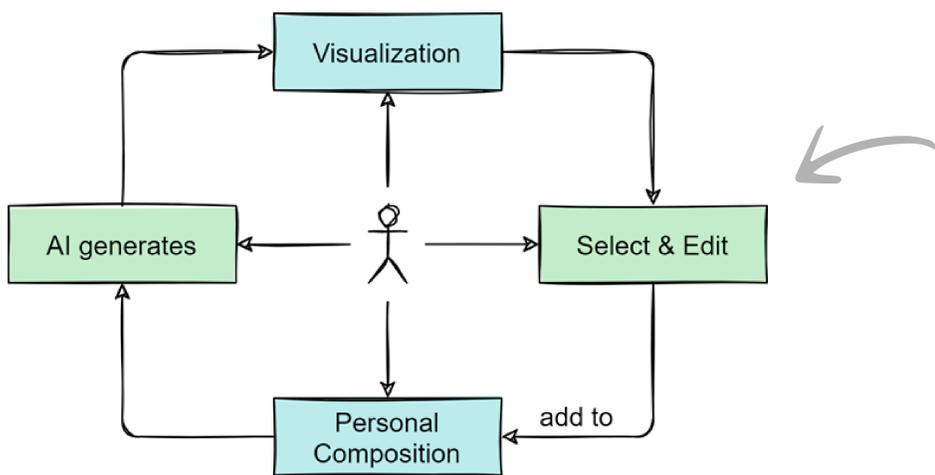
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# Visualization for AI-Assisted Composing

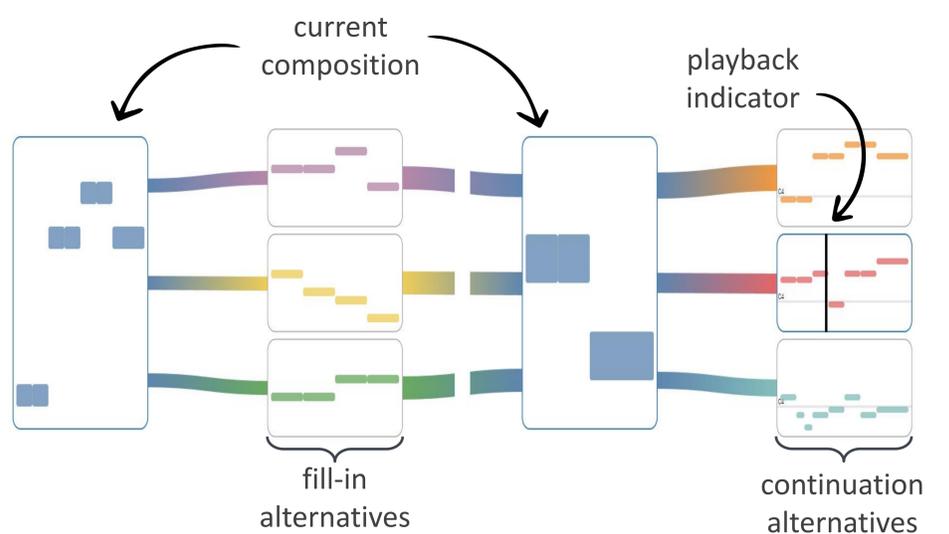
## Overview

- Automatic music generation does not provide artistic control → not *personal* creation
- We let users compose step by step, choosing from AI-generated alternatives
- Interactive visualizations make this choice more efficient
- Visualizations also help understand how parameters influence AIs



## User Workflow

- We sample multiple alternatives from an AI
- The user then chooses one from visual overviews
- Individual notes can be edited
- Repeat these steps until finished

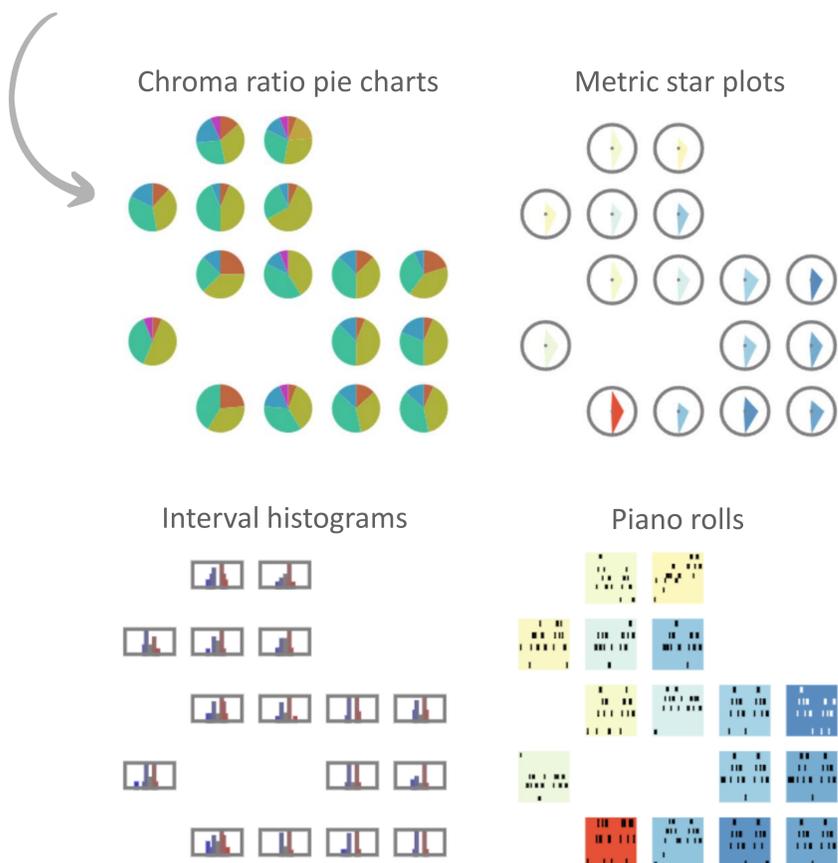


## Visual Composing

- We iteratively generate multiple continuations
- This results in a tree structure
- Fill-in alternatives extend it to a directed acyclic graph
- We display this structure as node-link diagram
- Nodes represent melodies as piano rolls
- Links connect nodes that are adjacent in time

## Understanding an AI and its Parameters

- A larger number of samples can reveal more general patterns that help better understand an AI
- We designed overviews for larger numbers using glyphs
- Glyphs summarize different aspects of samples



## Finding Inspiration

- We position the samples' glyphs by similarity in a grid layout
- Users save time by looking only at a few samples of a cluster before deciding whether it is interesting
- Outliers, which are very different and distant from the rest, can give inspiration as well

