NeuralMidiFx

A Wrapper/Template for Deploying Neural Networks as VST3 Plugins

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About Us

- **Behzad Haki** *(Ph.D. Candidate at MTG 2020-)*
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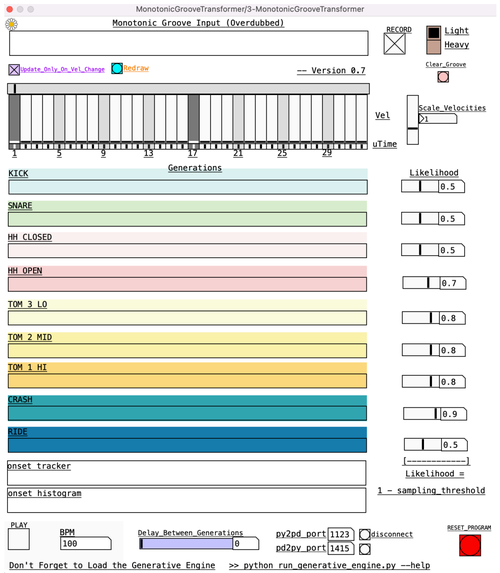
What is NeuralMidiFx?

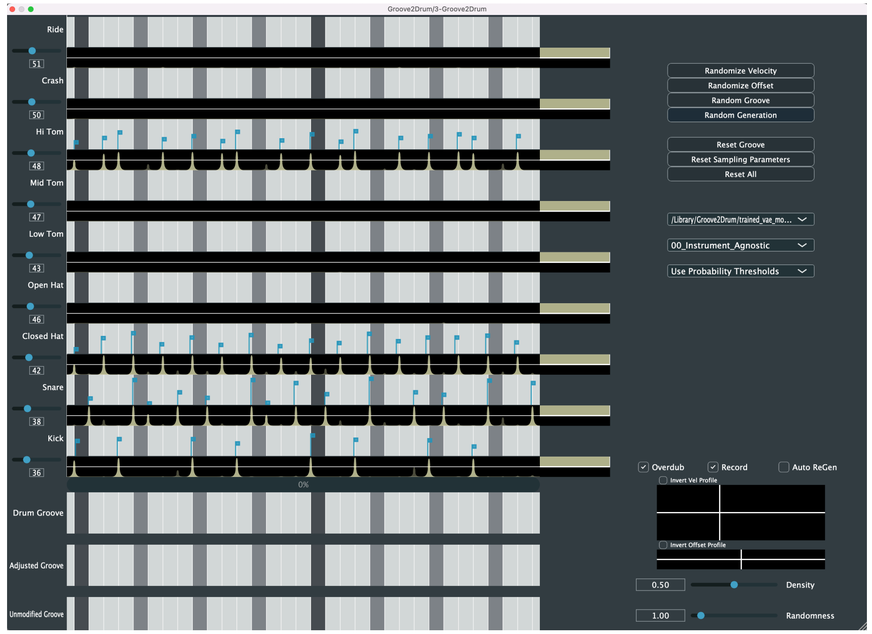
- A **VST3 Wrapper/Template** that streamlines the deployment of NN-based **generative** systems of **symbolic music**

- Targeted for **researchers** working on generative symbolic music

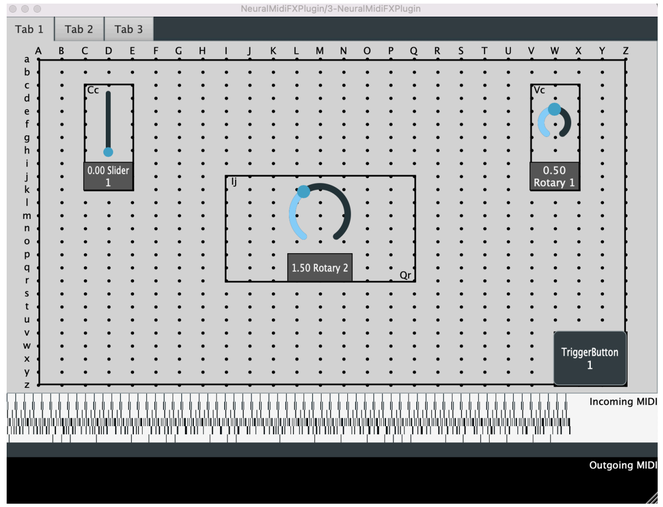
Motivation



VST Version 1:
Pure Data Frontend (Camomile)
Python Backend (Torch)
OSC Communication

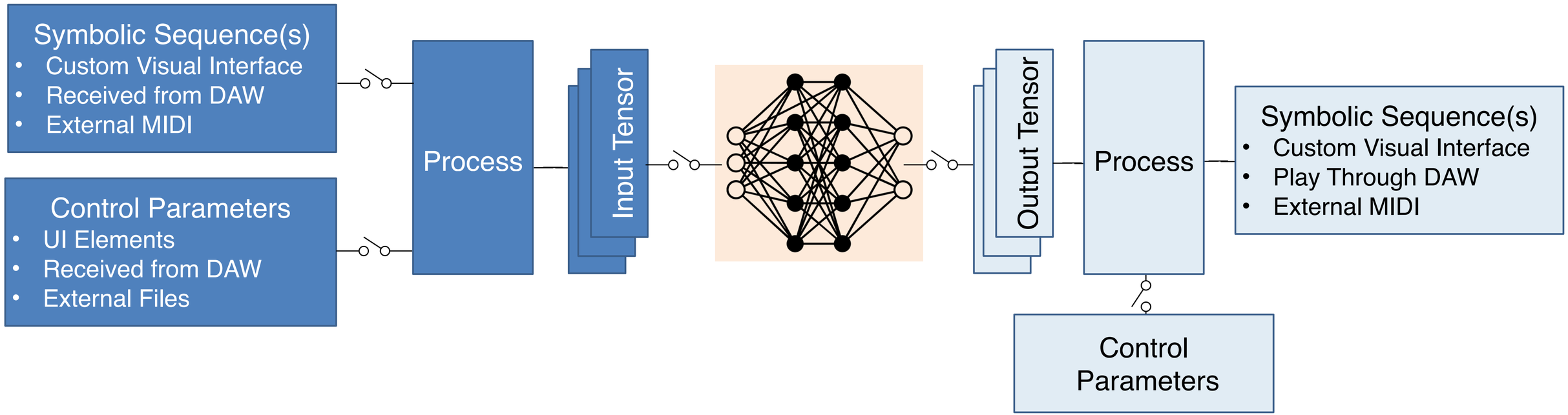


VST Version 2:
Self-Contained VST
JUCE with Libtorch



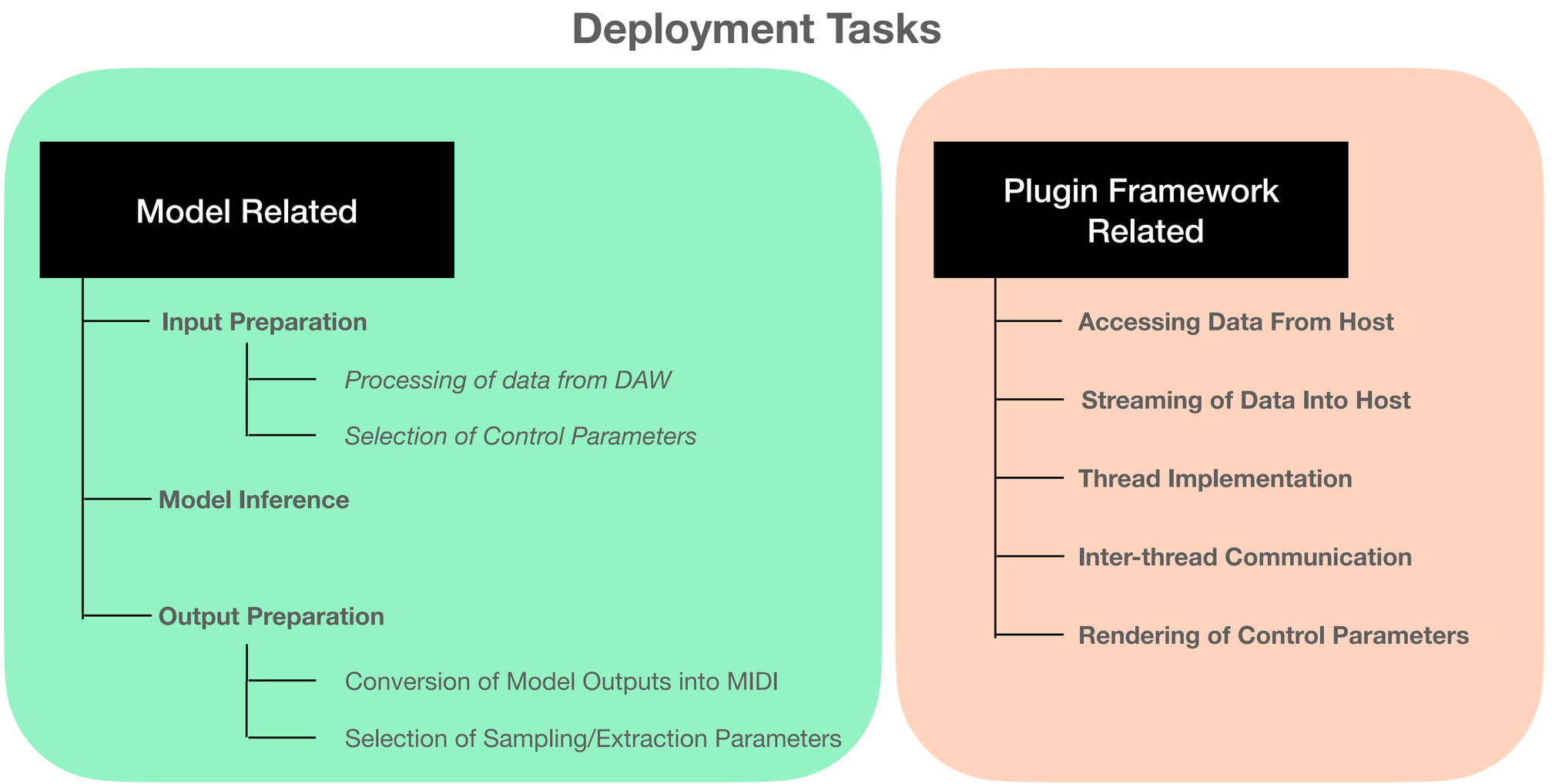
NeuralMidiFx
Self-Contained VST
JUCE with Libtorch

Why is VST deployment challenging?



- Designing UI and interacting with DAW requires knowledge of frameworks like JUCE
- Multi-threaded design is essential and extremely complex
- As opposed to the research stage, VST deployment is usually done in C++

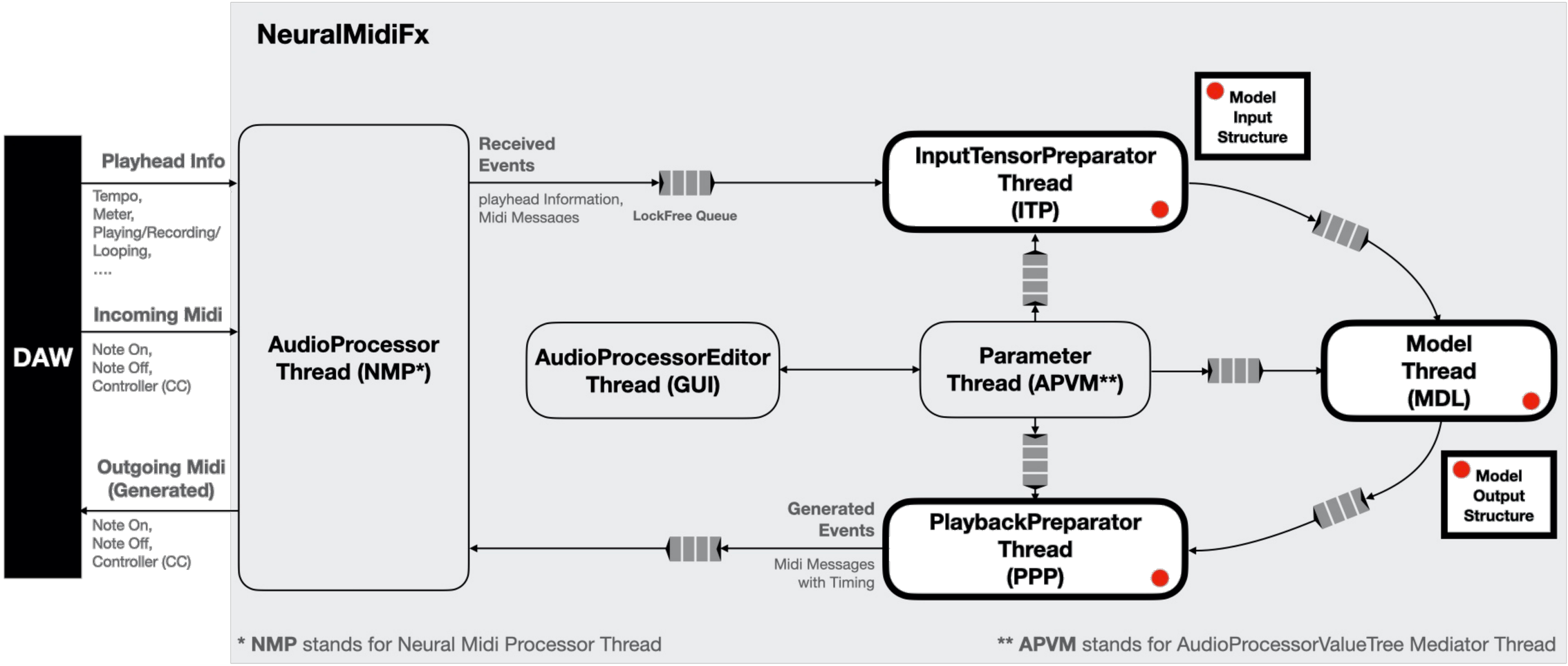
Design Decisions For NeuralMidiFx



Researcher's Responsibility

Fully Handled By NeuralMidiFX
(no further development needed)

Architecture



Resources

Paper
Source Code
Documentation
Tutorials / Examples
www.behzadhaki.com/AIMC2023