

Student Presentations

Pika Pachi!

Alma Dzehverovic

Pika Pachi! is a hybrid pinball machine and Pure Data music generator. This project is inspired by the Japanese arcade pop culture, which is characterized by its vibrant atmosphere and pulsating music. Arcades and pachinko parlors in Japan offer a sensory escape from everyday life, providing a unique blend of entertainment and nostalgia that is rare in other parts of the world. The name Pika Pachi! comes from the Japanese onomatopoeias “pika pika” (ぴかぴか or ピカピカ) for “sparkling, shiny” and “pachi pachi” (パチパチ) for the sound of clapping or banging.

When the ball rolls over the infrared sensor, it triggers an audio patch from Pure Data that evolves over time, becoming increasingly distorted, louder, or faster. Listening to the audio patch becomes so unbearable that the player's goal is to quickly redirect the ball to the sensor again to change the audio patch and reset the listening experience. For this project, I worked with Arduino Uno to control the sensors and other electrical components, and solely with Pure Data without any external plugins or samples to create the audio patches for the project.

Mic Man

Leonie Schönfeldinger

My project is called Mic Man and is a product that I was allowed to develop and build during the 2nd semester. I was allowed to develop and build. It is a sensor that measures the distance between the speaker and the microphone and emits a light signal according to the distance. If the distance between the speaker and microphone is appropriate, the Mic Man lights up green, as soon as the distance becomes too great, a red light appears. All I need for the presentation is a high table and a power socket.

Mess!

Gabriel Kaiser

The ‘Mess!’ project is a VST or AU plug-in for Windows and Mac. It is a combination of reverb, gate and distortion, which through repeated use leads to a broken and very distorted sound experience.

Sweet Spotter

Paul Pfeiffer

Sweet Spotter is a system for adjusting the sweet spot for hi-fi stereo systems. The system is controlled via a Raspberry Pi. From the image of a webcam, the system detects the deviation of the listener from the sweet spot and compensates for amplitude and time deviations so that a near to perfect stereo panorama is created.

Sonic Climbing

Jakob Moisl

Sonic Climbing is a project which explores the use of auditory signals to support and enhance the performance of climbers on climbing walls. The goal is to develop a system that provides targeted sound impulses and auditory feedback to support climbers in their training and improve their movement and concentration skills. Also it could help blind people to be able to climb on their own. First experiments on a climbing wall were conducted where different sounds have been used to see what the test persons liked most and helped them best to find the next climbing hold on the wall. On the All Around Audio Symposium you can see the results of the experiment.

Echo Chamber

Moritz Raimund

The aim of the “Echo Chamber” was to develop a digital tape delay that recreates the characteristic sound features and artifacts of analog devices. The heart of the project is a Pure Data Patch that runs on a Raspberry Pi 4 and simulates the functionality of a tape delay. The Pi can be integrated into an effects chain via an audio module, in order to use the digital tape delay live. The parameters of the patch are controlled via an external USB controller.