Phil Nevins <p.nevins971@gmail.com>
Arie Jorritsma <ajorrit2@pdx.edu>
ECE-508 Python Workshop

FM Radio Receiver
Project Proposal

Our proposed final project is an FM Radio Receiver. This idea came from our interest in utilizing GNU Radio, which allows us to write custom blocks and take advantage of its built-in automated blocks. By doing so, we can code in Python within the scope of the class while also creating a visually engaging project demonstration. We're currently building an SDR as part of our other work, so developing this project in parallel directly supports and complements that effort. For hardware, we plan to use the RTL-SDR Blog V3 along with an FM-capable antenna, all connected to an RPi5 or linux machine. They will handle signal processing and output the radio station through its 3.5mm headphone jack or to USB headphones.

Coding
Custom python blocks for GNU FM Radio
Tkinter UI / GNU Radio UI

BOM
RPI5 + SD-Card / linux machine (personal)
FM-Capable Antenna
RTL-SDR Blog V3