



# Radiation Pattern of Millimeter Wave Antennas

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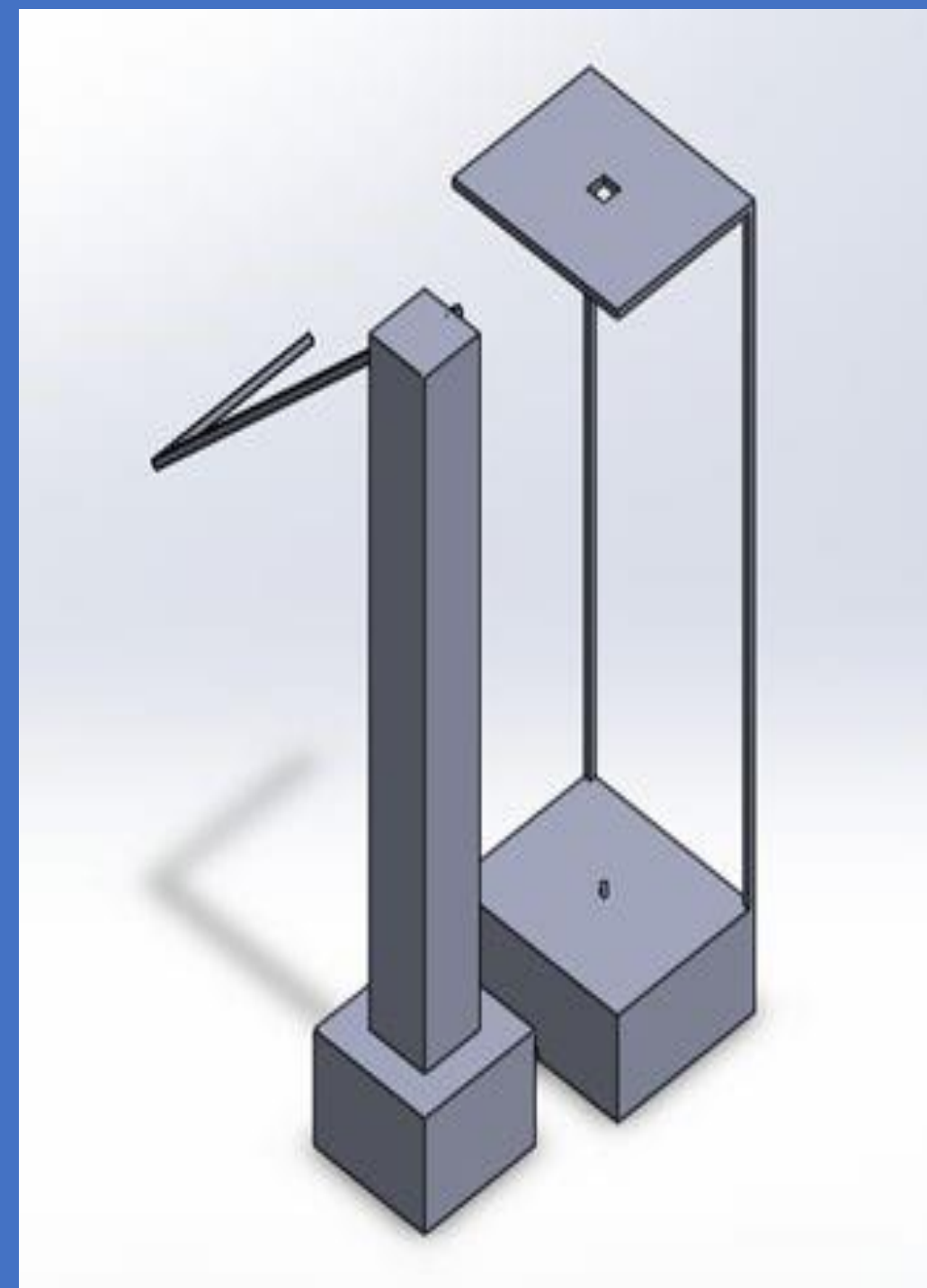
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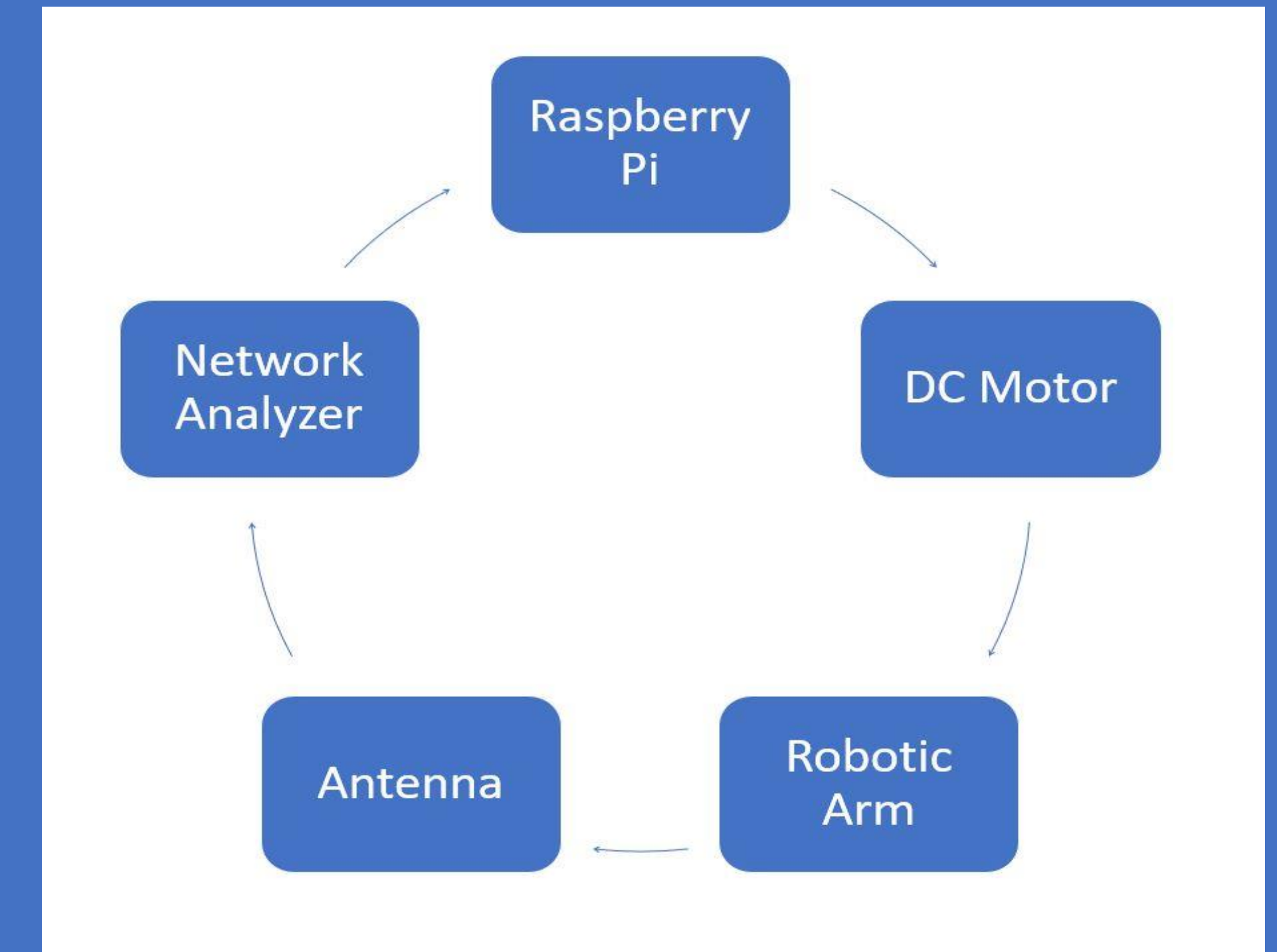
## Introduction

Our project is to make a system that can use to measure the radiation pattern of millimeter wave antennas. The system consists of two parts. One part supports the antenna, and another one supports a motor and a rotating aluminum arm where a receiving open-ended waveguide. Millimeter wave antennas are important for radar applications, imaging systems, and future 5G communications.

## System Structure



## Approach



Task/Week	1	2	3	4	5	6	7	8	9
Raspberry Pi Programming	█	█	█						
Mechanical Structure			█	█	█				
Analyzer Communication						█	█		
Interface Design							█	█	█

## Challenges

1. The robotic arm which is used to hold the detector is too heavy to keep it stable. We may need to use a new material for it.
2. No one in our group has the experience of Network analyzer before. Therefore, we need to learn how to transmit the simulation to our PC.