

## Building a Custom Alexa Skill using Raspberry Pi for Voice TV Control



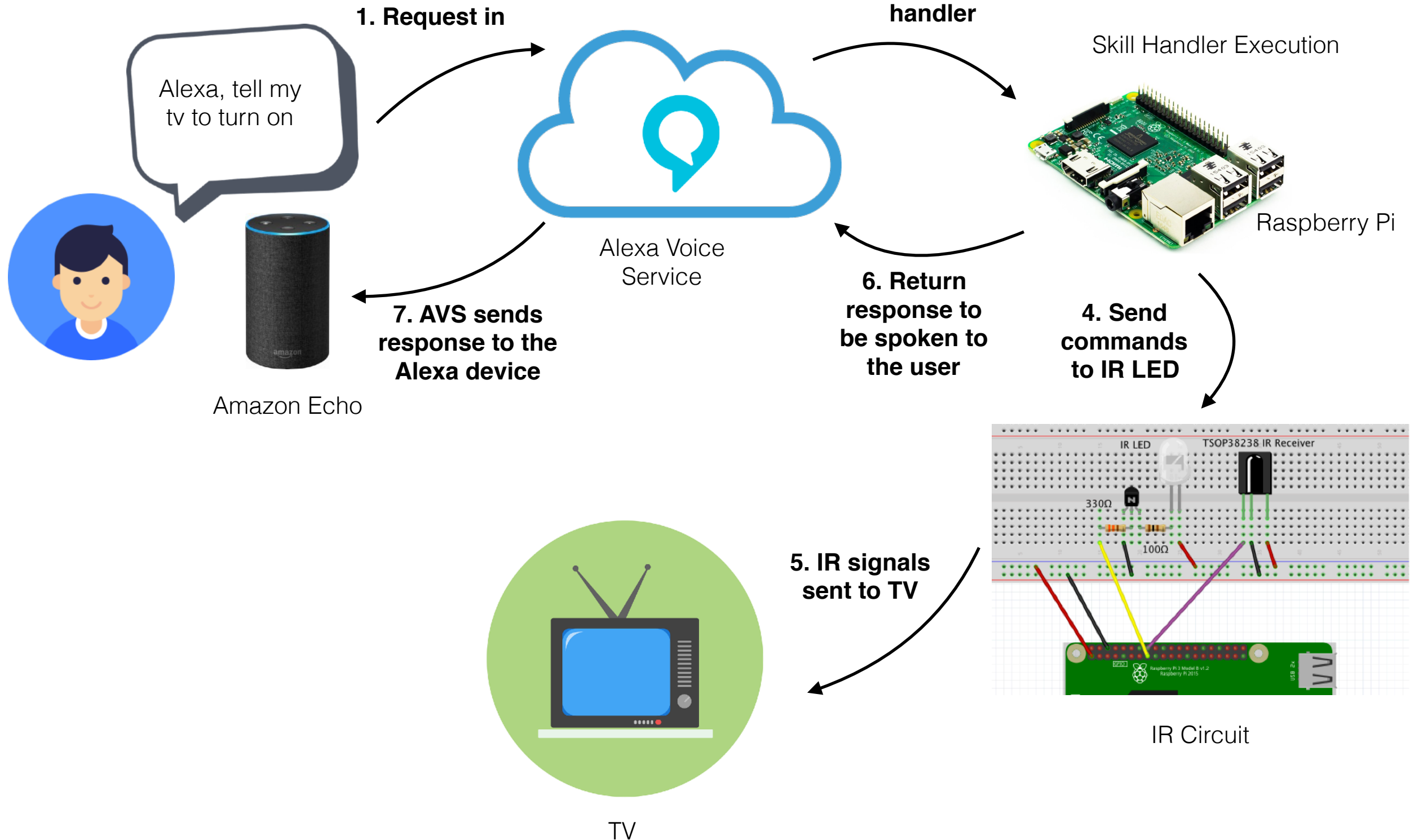
Control any TV using your voice and Alexa

# Project Overview

## 2. Match incoming request to an intent

- Natural Language Processing
- Speech to Text Conversion
- Match Intents
- Populate Slots

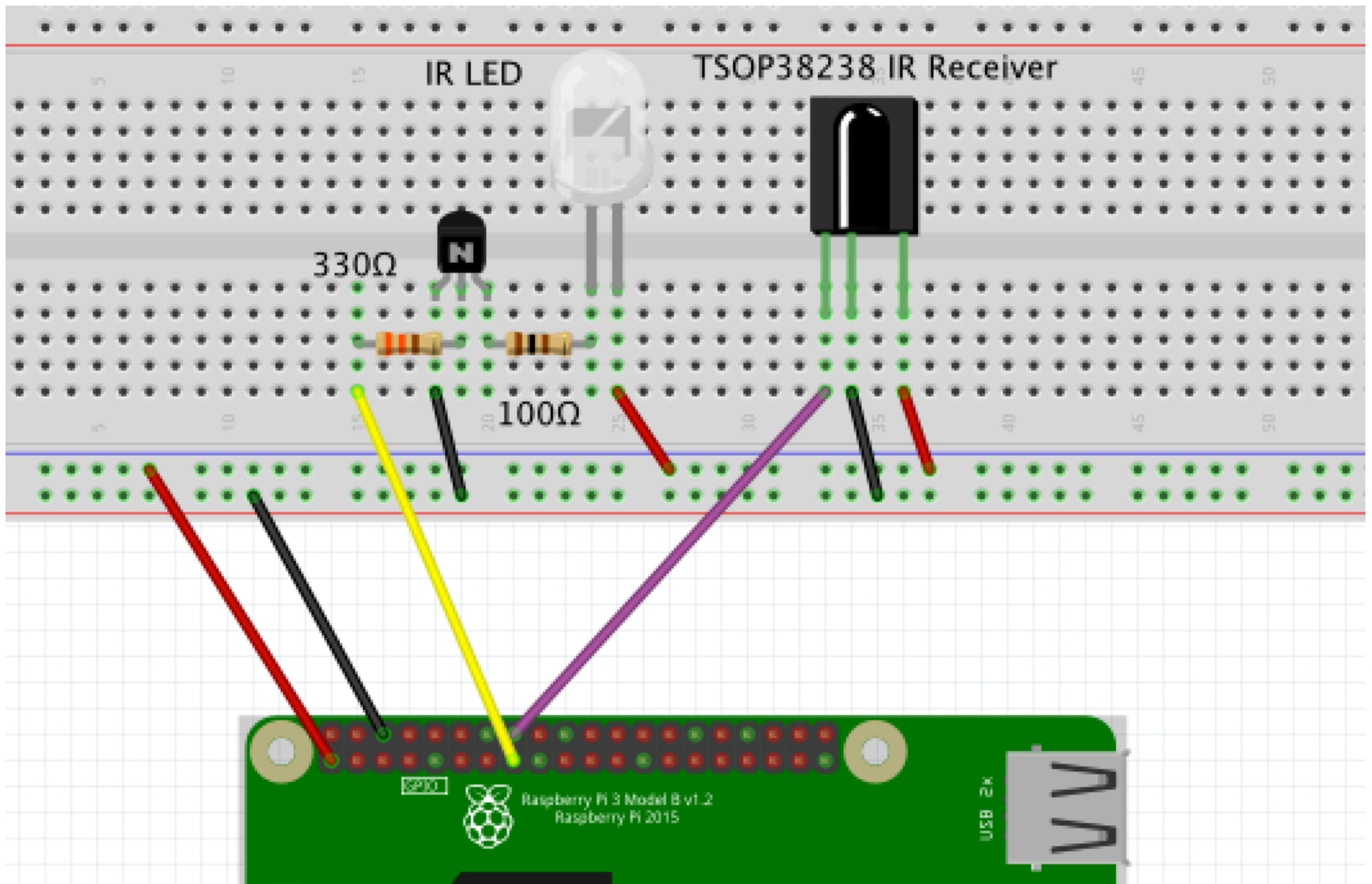
## 3. Call skill handler



# Parts needed

- Raspberry Pi 3
  - DC Power Adapter
  - Micro SD Card
  - HDMI Cable and Monitor [Optional]
  - Keyboard / Mouse [Optional]
- IR Circuit Components
  - 330  $\Omega$  resistor
  - 100  $\Omega$  resistor
  - IR LED
  - TSOP38238 IR Receiver
  - NPN Transistor
  - Breadboard
  - Connecting wires
- Amazon Echo Device (optional)
- Any TV with that works with an IR remote

# Circuit Diagram



# Circuit Connections

## NPN Transistor

Pin	Connection
Base	Resistor to GPIO22
Collector	Resistor to Cathode IR LED
Emitter	GND

## Raspberry Pi

Pin#	GPIO#	Connection
1	3.3V	Power Rail
6	GND	Ground Rail
15	GPIO22	Resistor to NPN Base
16	GPIO23	OUT IR Receiver

## IR Receiver

Pin	Connection
Vs	3.3V
GND	GND
OUT	GPIO23

## IR LED

Pin	Connection
Anode	3.3V
Cathode	Resistor to NPN Collector