

# Perfilômetro

Adolfo Serique

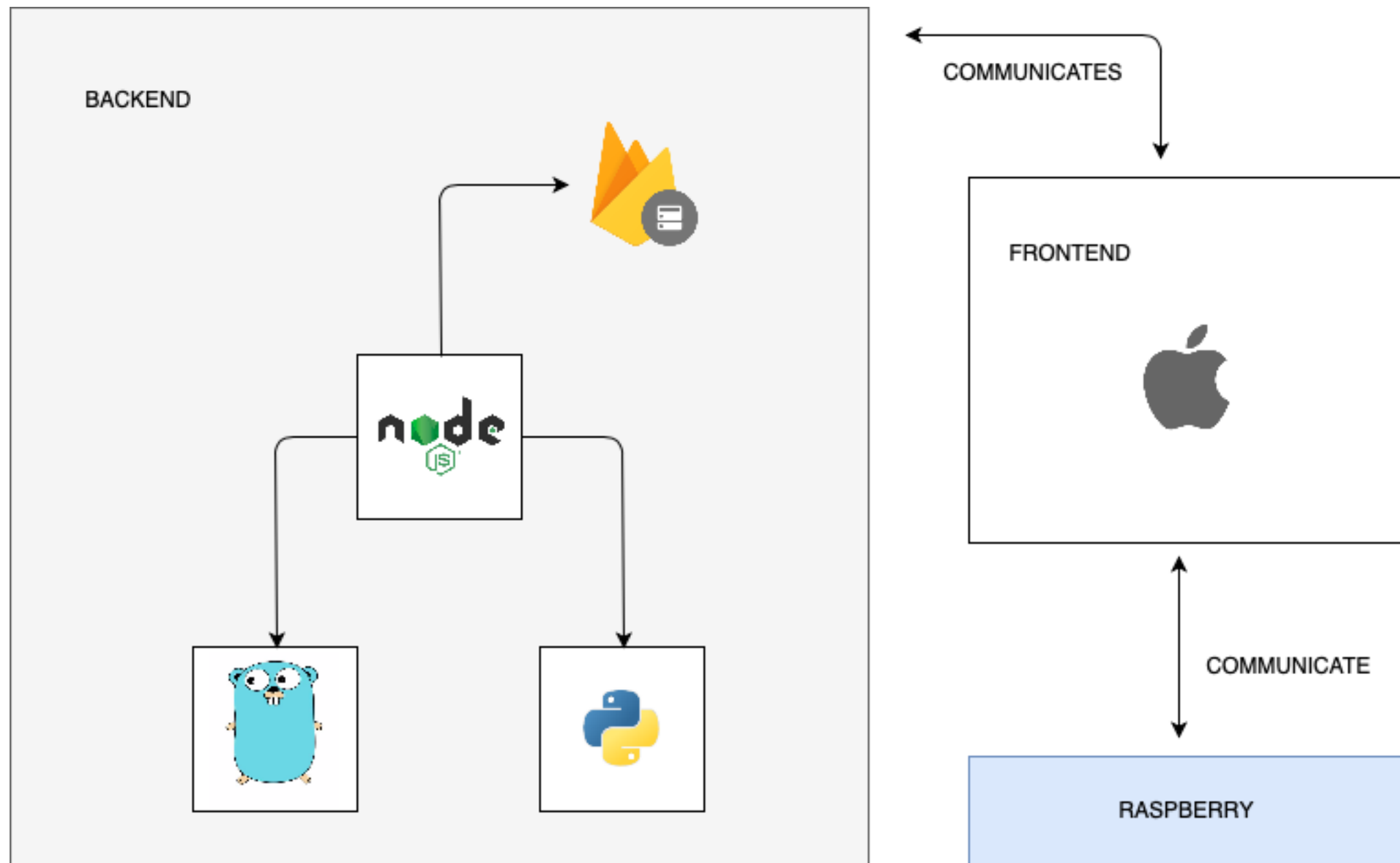
Antonino Martins

Guilherme Baldissera

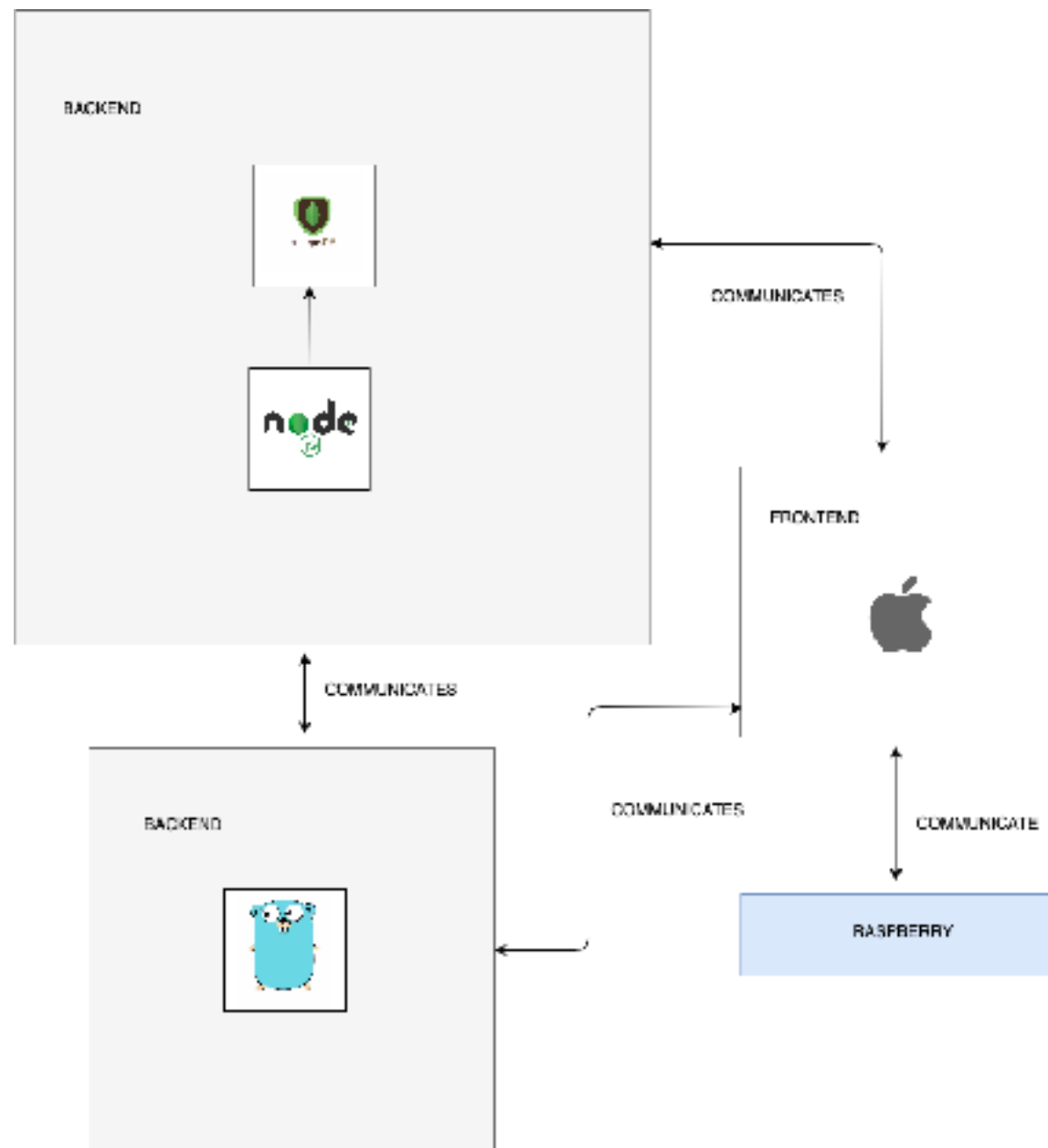
Miguel Pimentel

Vitor Umpierre

Karoline Sales



# Software



# Software



perilometer-go

heroku-18 · United States ★

perilometer-node

heroku-18 · United States ★



guilhermibaldissera@gmail.com: Deployed `b95c37ca`

[Roll back to here](#)

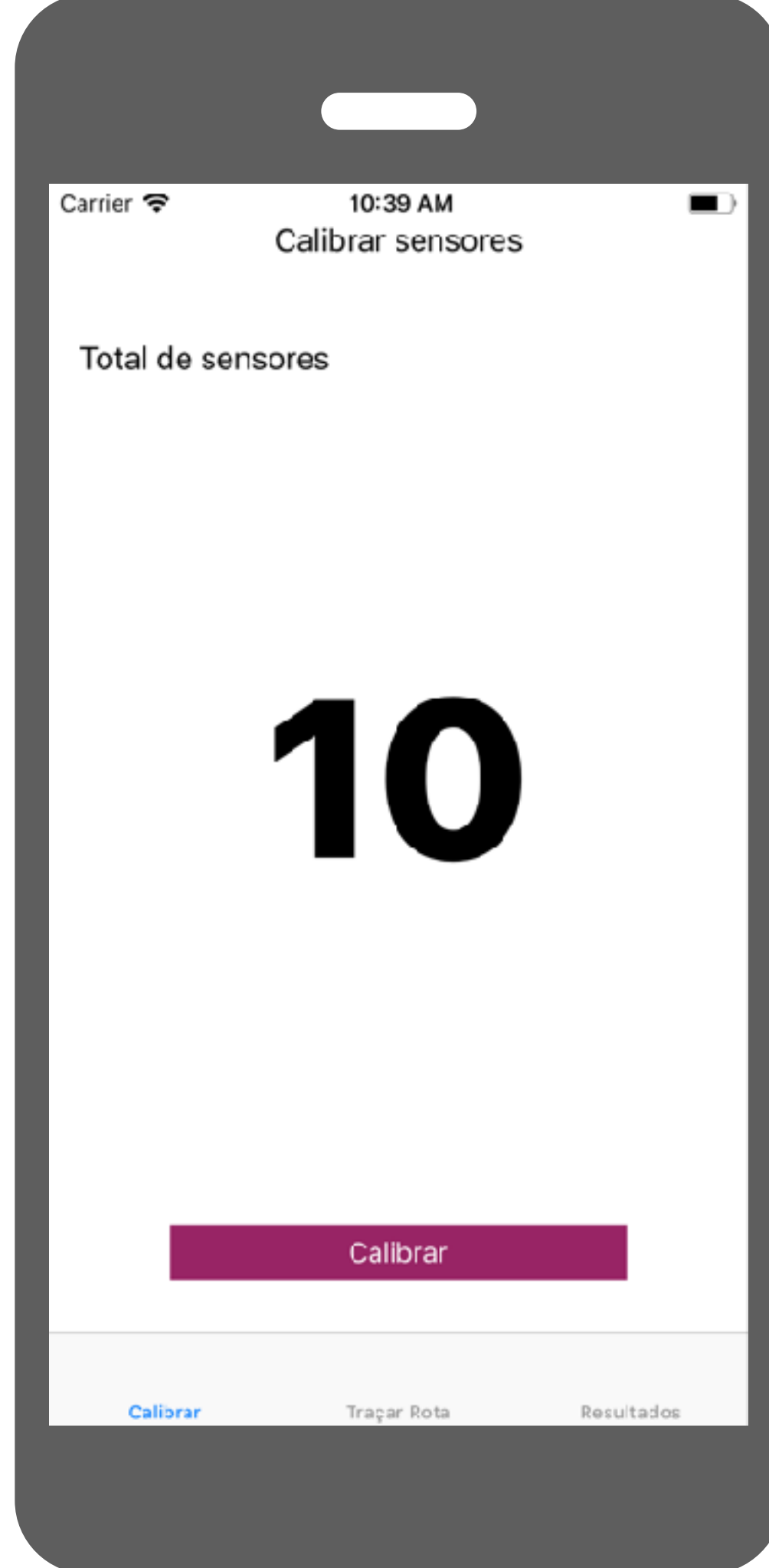


guilhermibaldissera@gmail.com: Build succeeded

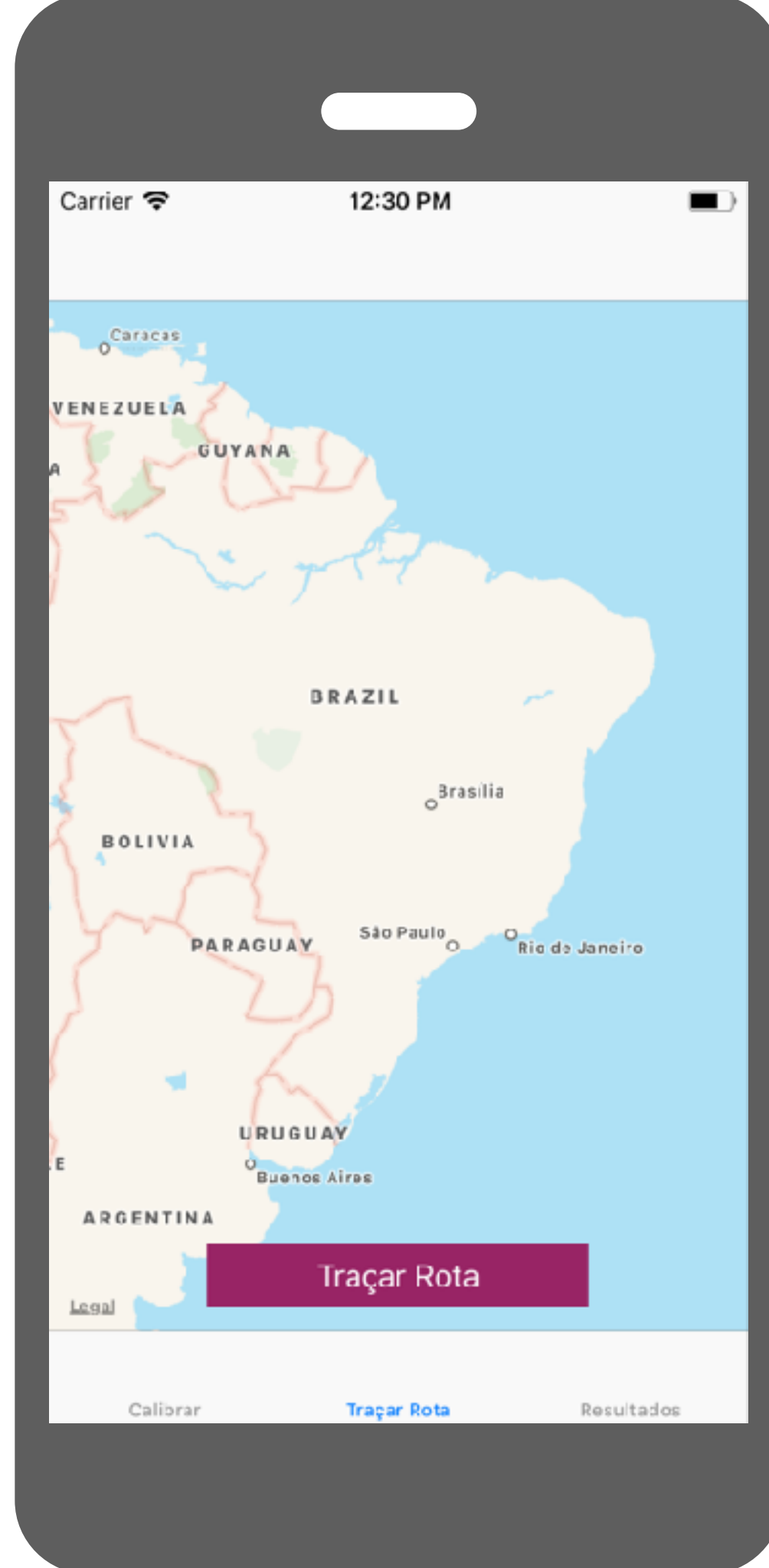
[View build log](#)

# Software

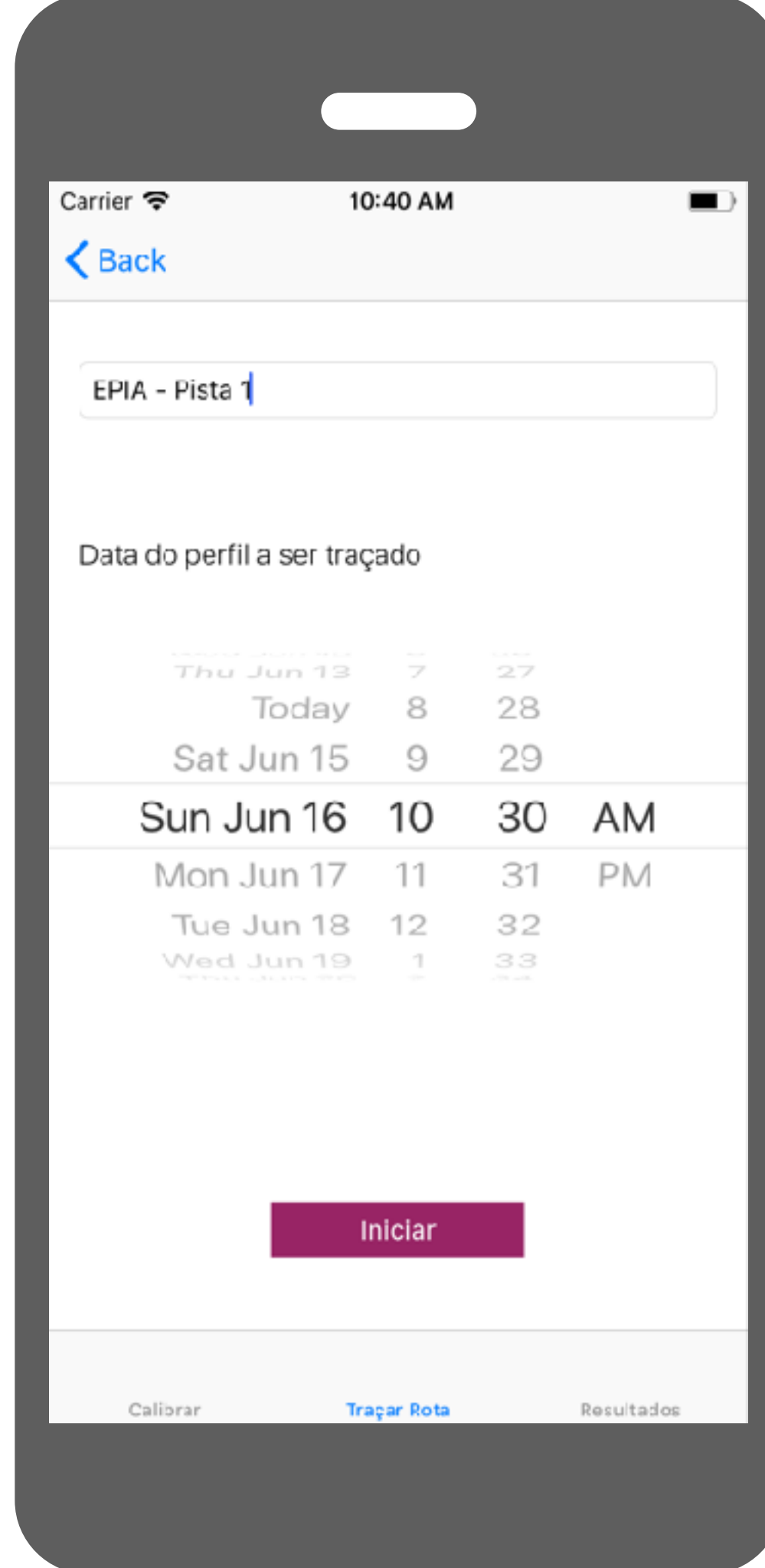
# Software



# Software



# Software

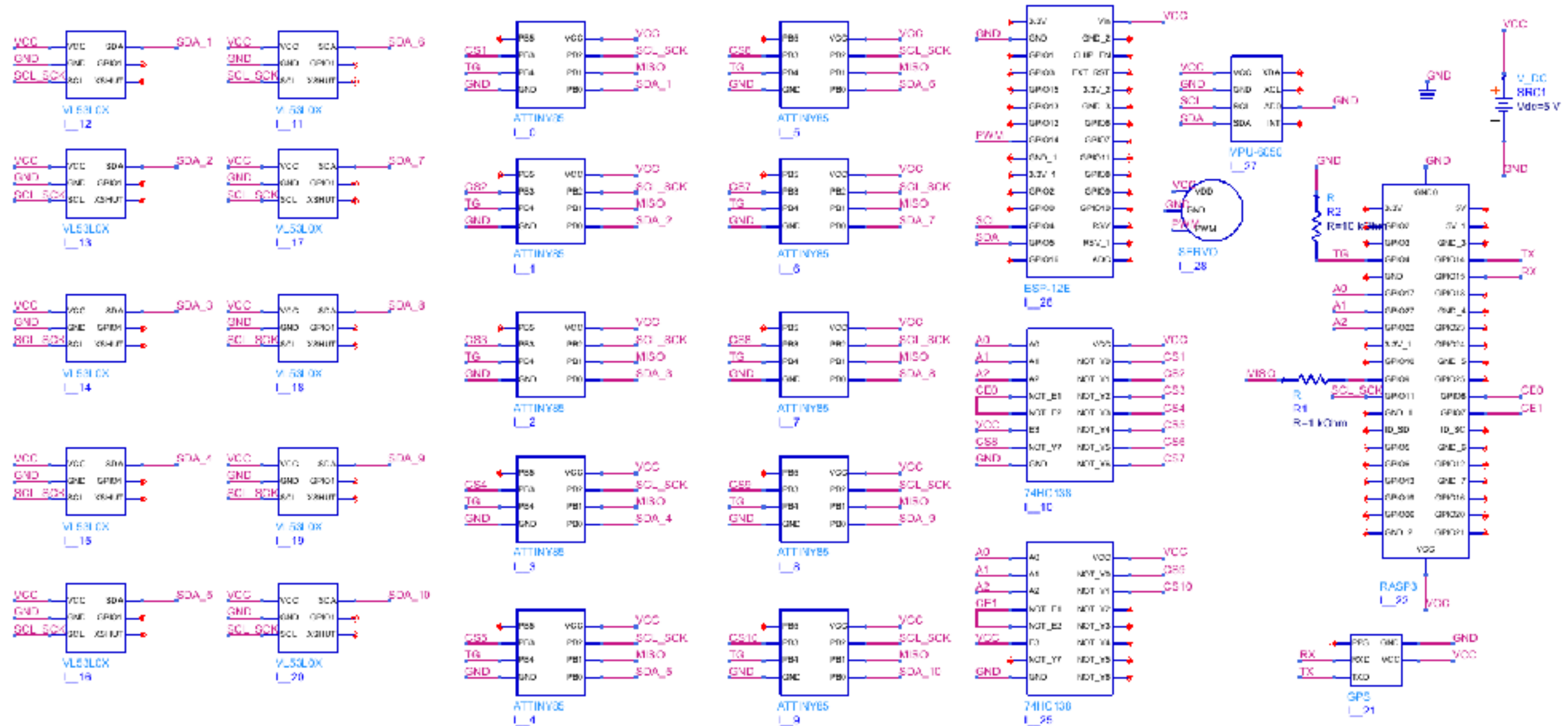


# Software

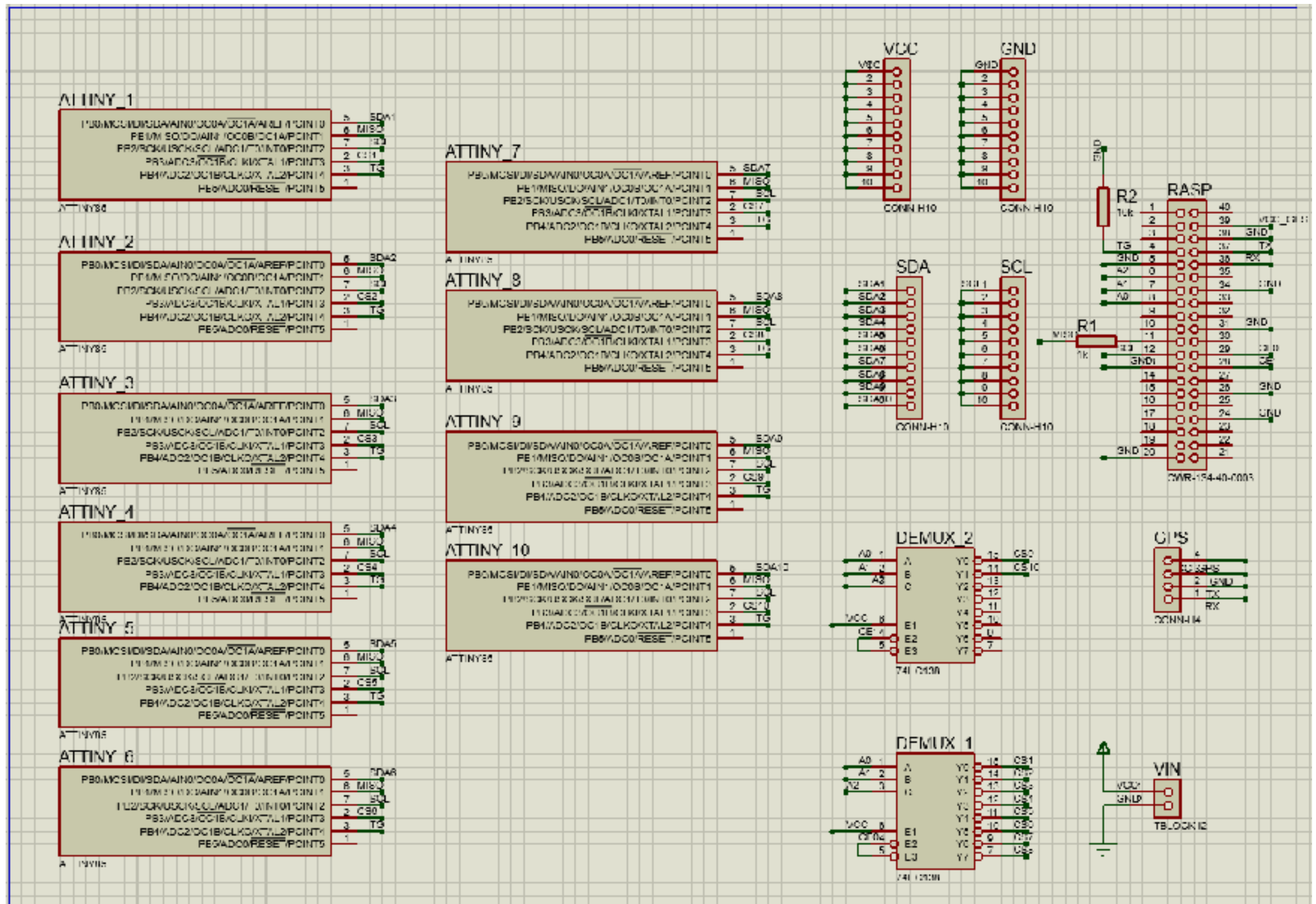




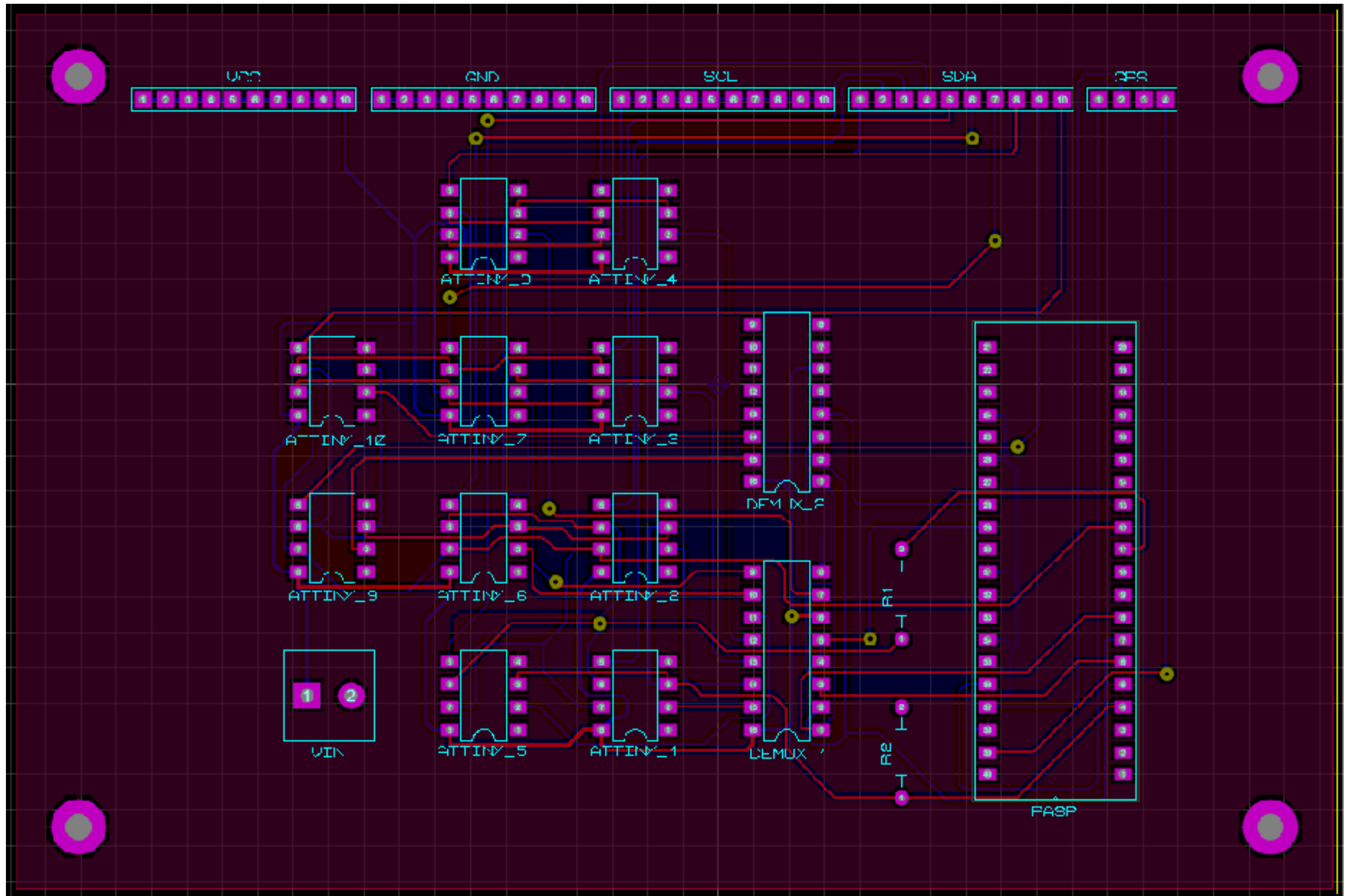
# Eletrônica



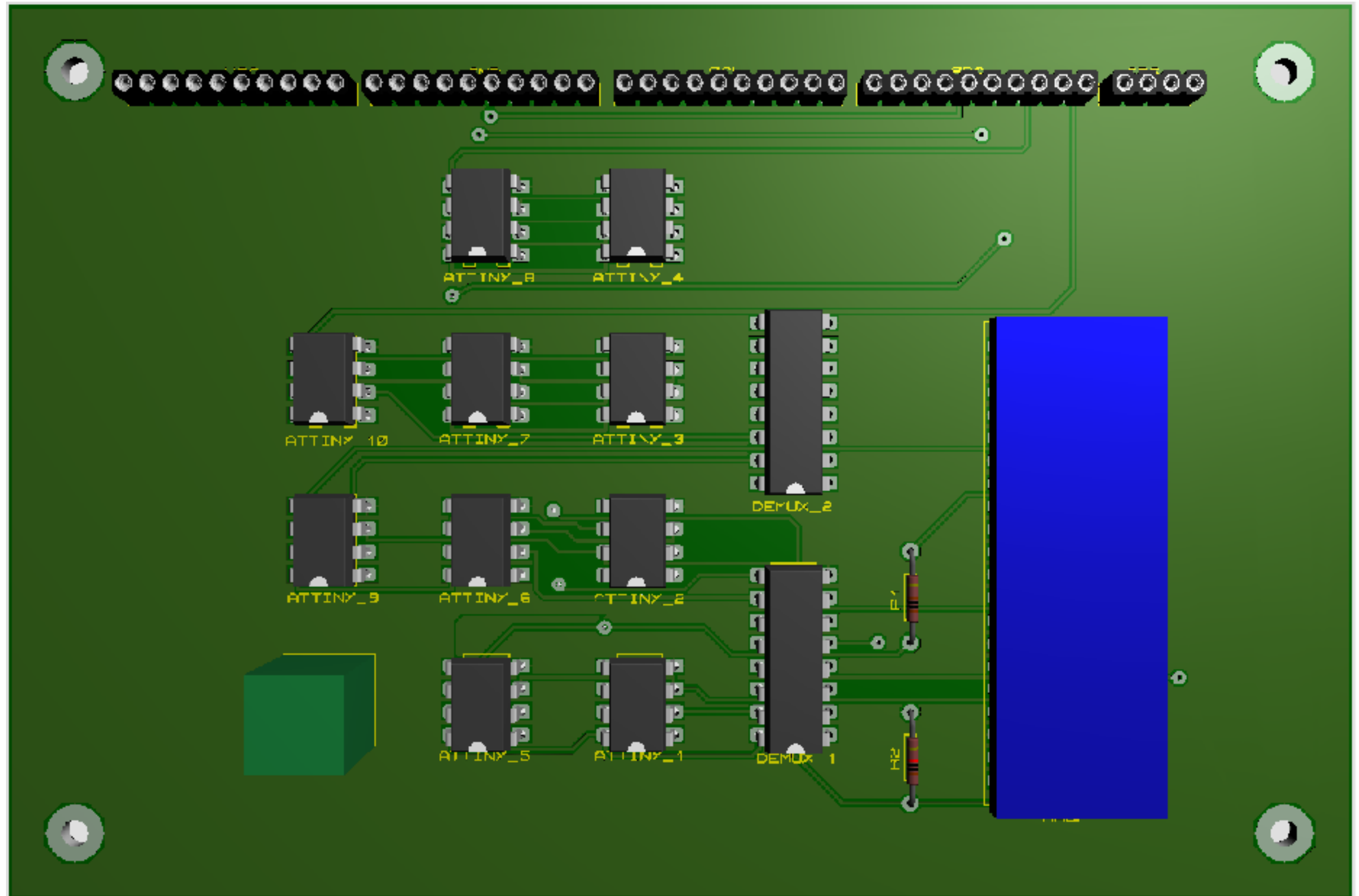
# Eletrônica



# Eletrônica



# Eletrônica



# Eletrônica

Design Rule Manager

Design Rules | Net Classes | Defaults

Rule Name: PI2 New Rename Delete

---

Apply to Layer:  
☐ (All Layers)

Apply to Net Class:  
(All Classes)

With Respect To:  
☒ All Net Classes  
☐ The Same Net Class  
☐ Other Net Classes

Clearances

Pad - Pad Clearance: 9th

Pad - Trace Clearance: 9th

Trace - Trace Clearance: 9th

Graphics Clearance: 15th

Edge/Slot Clearance: 15th

Apply Defaults

☒ Enable design rule checking?

OK Cancel

# Eletrônica

Design Rule Manager

Design Rules | Net Classes | Defaults

Net Class: SIGNAL [v] [New] [Rename] [Delete]

---

**Routing Styles**

Trace Style: PADRO3 [v]  
Neck Style: PADRO3 [v]  
Via Style: V60 [v]

**Via Type:**  
☒ Smart  
☐ Thru-Hole

**Ratsnest Display:**  
Colour: ■  
Hidden? ☐

**Layer Assignment for Autorouting**

Pair 1	(Hoz): <span style="color: red;">■</span> Top Copper [v]
	(Vert): <span style="color: blue;">■</span> Bottom Copper [v]
Pair 2	(Hoz): <span style="border: 1px solid black;">  </span> (None) [v]
	(Vert): <span style="border: 1px solid black;">  </span> (None) [v]
Pair 3	(Hoz): <span style="border: 1px solid black;">  </span> (None) [v]
	(Vert): <span style="border: 1px solid black;">  </span> (None) [v]
Pair 4	(Hoz): <span style="border: 1px solid black;">  </span> (None) [v]
	(Vert): <span style="border: 1px solid black;">  </span> (None) [v]
Priority:	1 [v]

[OK] [Cancel]

# Eletrônica

Design Rule Manager

Design Rules | Net Classes | Defaults

Net Class: POWER New Rename Delete

---

**Routing Styles**

Trace Style: T15

Neck Style: T15

Via Style: V60

**Via Type:**

☒ Smart

☐ Thru-Hole

**Ratsnest Display:**

Colour ☒

Hidden? ☐

**Layer Assignment for Autorouting**

Pair 1	(Hoz):	<input checked="" type="checkbox"/> Top Copper
	(Vert):	<input checked="" type="checkbox"/> Bottom Copper
Pair 2	(Hoz):	<input type="checkbox"/> (None)
	(Vert):	<input type="checkbox"/> (None)
Pair 3	(Hoz):	<input type="checkbox"/> (None)
	(Vert):	<input type="checkbox"/> (None)
Pair 4	(Hoz):	<input type="checkbox"/> (None)
	(Vert):	<input type="checkbox"/> (None)
Priority:		1

OK Cancel



# Energia

## Cargas

	Quantidade	Tensão (V)	Corrente Total (A)	Potência Total (W)
Microcontrolador	10	5.5	1	5.5
Raspberry Pi	1	5	2.5	12.5
Sensores	10	3.5	0.5	1.75
ESP	1	3.5	0.2	0.7
Lanterna traseira	2	12	1	12

A potência total requerida é de 32.45 W, logo o gerador deverá operar em pelo menos 1900 RPM para conseguir suprir a demanda.



# Energia



# Energia

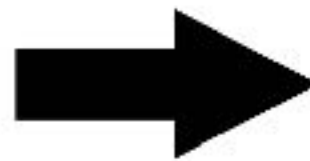
Testes com a polia

RPM	Tensão (V)	Corrente (A)	Potência (W)
3100	14	4.5	63
2340	12.4	3.5	43.4
1700	11	2.5	27.5
1100	8.5	1	8.5
620	7	0.6	4.2

# Energia



30km/h ou 290rpm

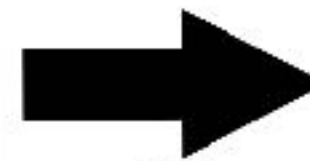


Polia 8cm

**Dinamo**

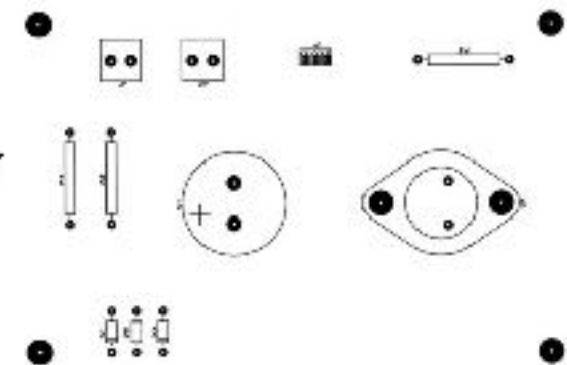


2000rpm



2.8A  
12V  
33.6W

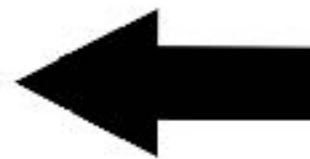
**Controlador de carga**



**Bateria 12v 7Ah**



**Carga**  
5V 32W

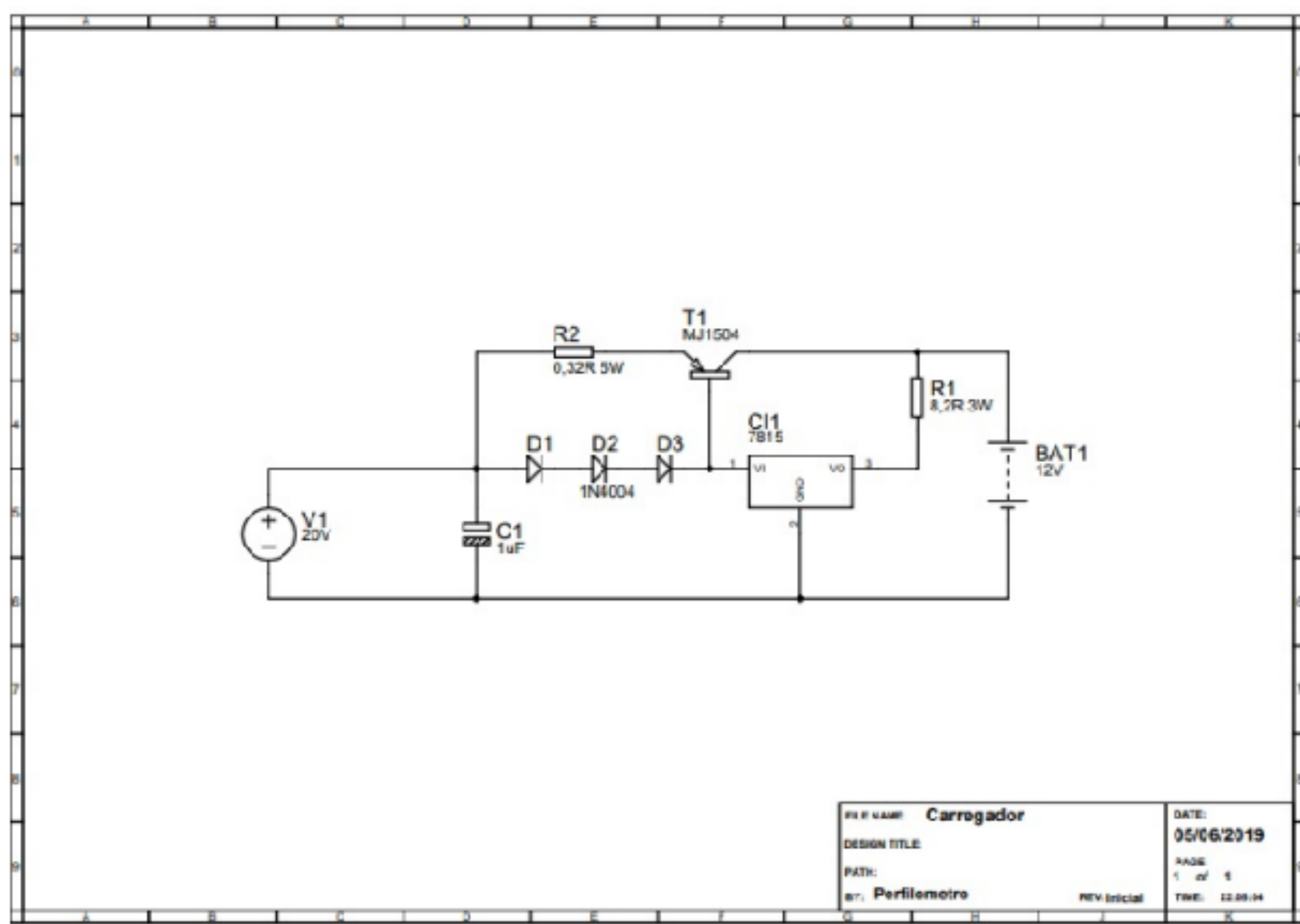


**Step-Down**  
12v-5v



# Energia

Controlar de Carga

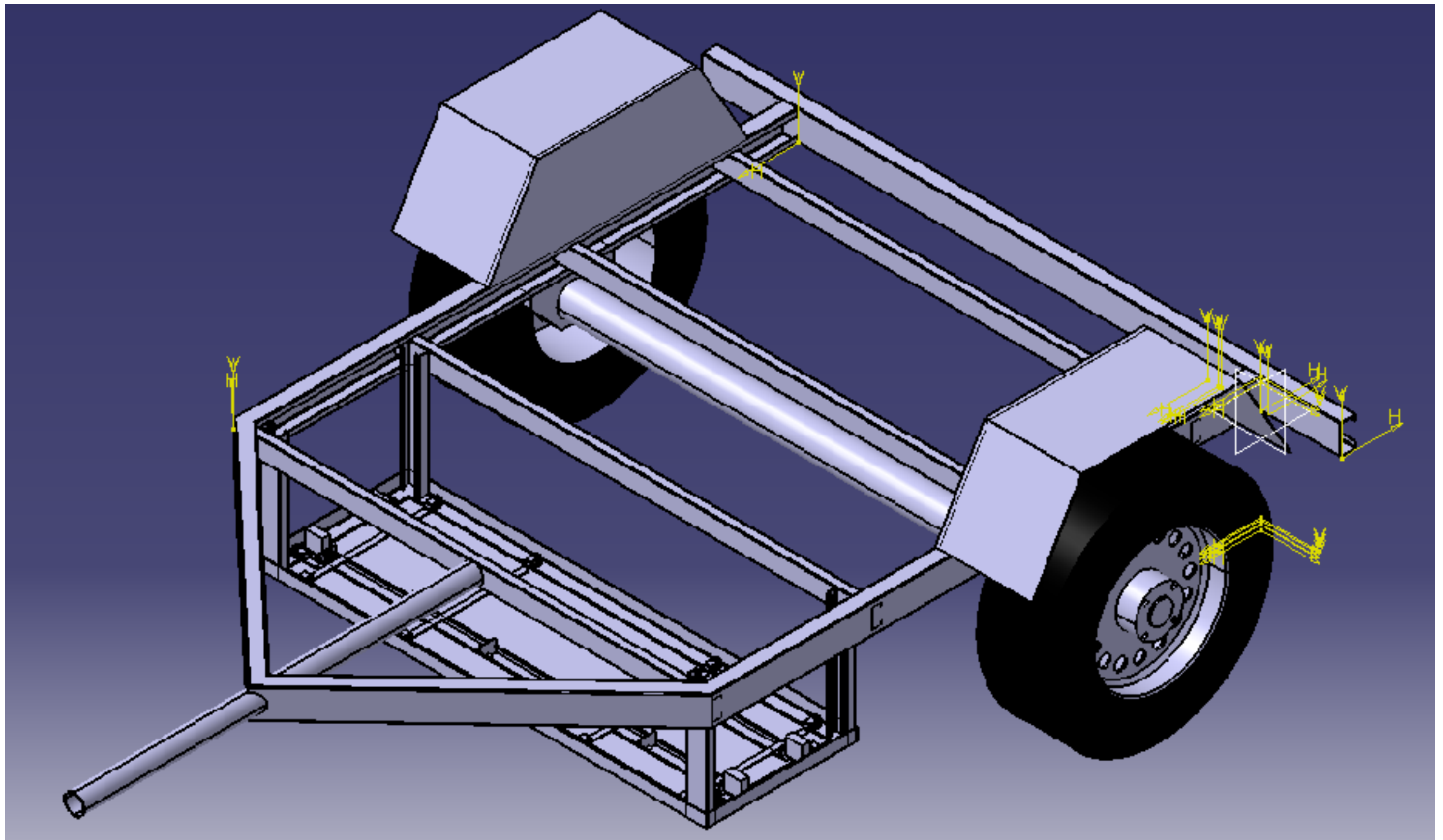


StepDown

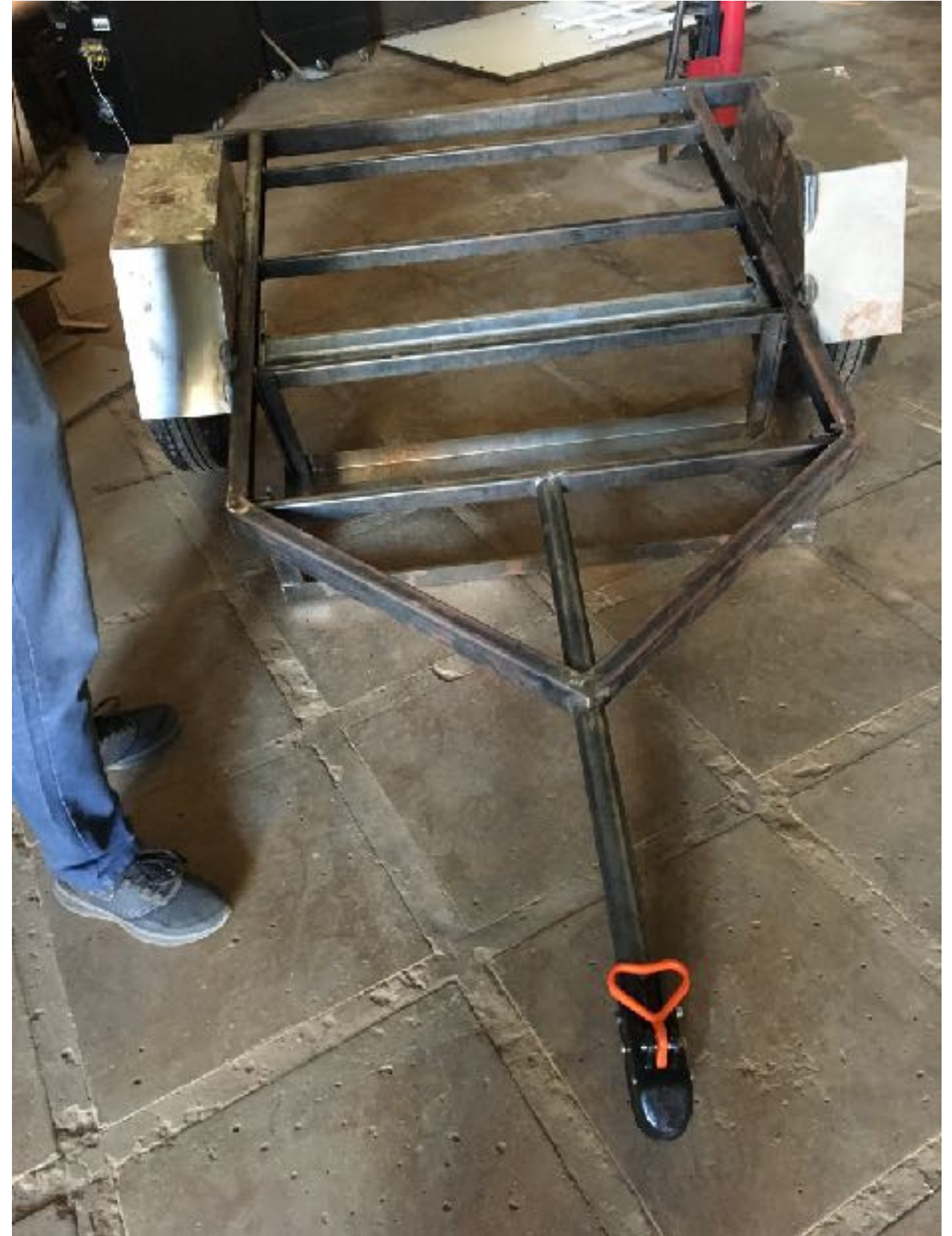




# Estrutura



# Estrutura





# Estrutura





# Estrutura





# Próximos Passos

**Dúvidas?**