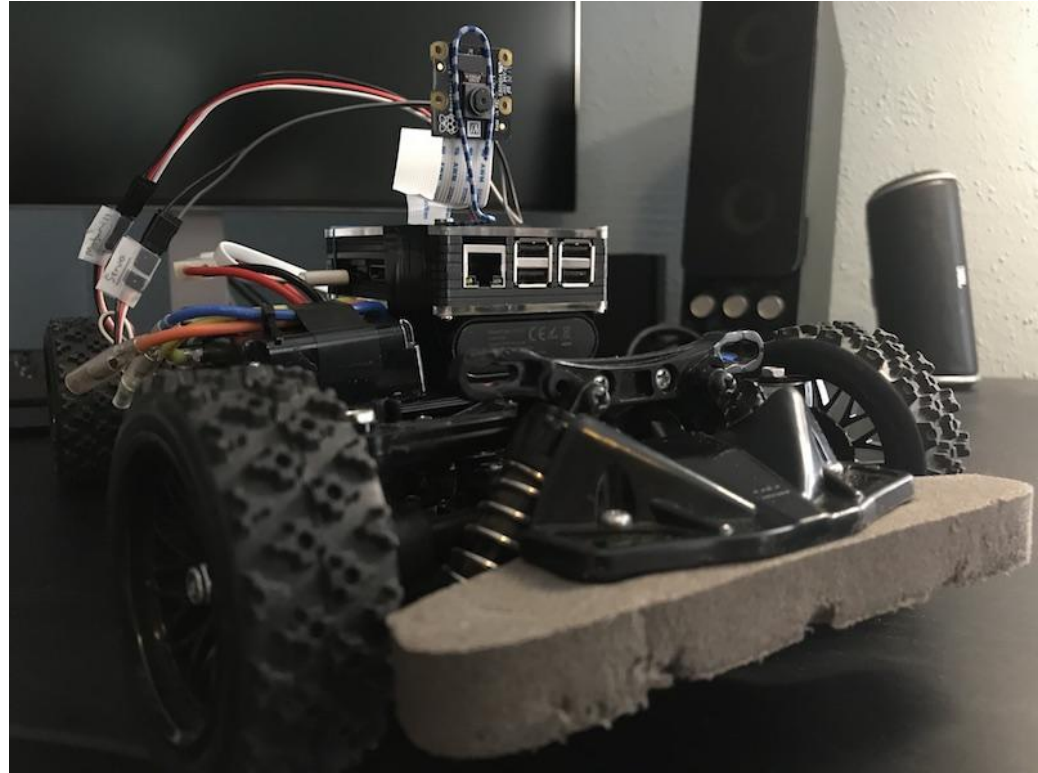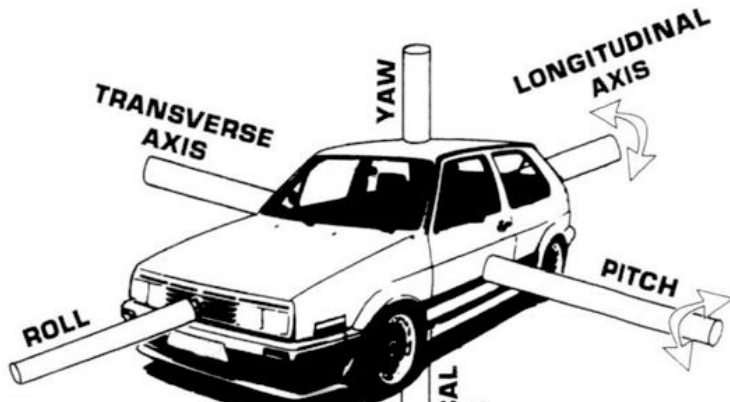# AutoDrive

Pink Flamingo

Jianjie Liu, Michael Morscher, Yu (Phoebe) Yang
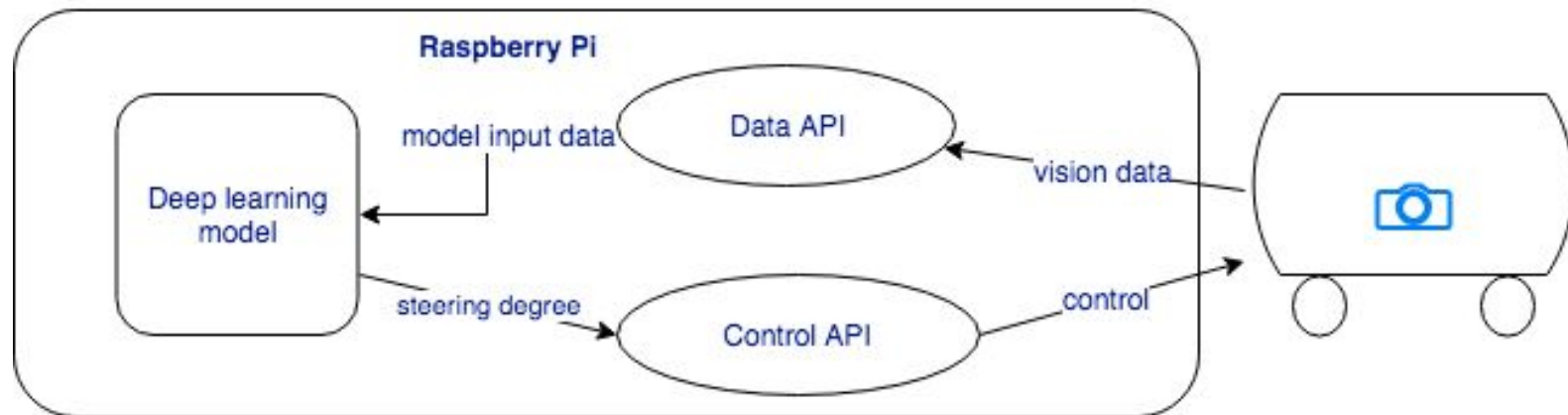
Demo

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Focus Feature: Autonomous Steering

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- 2 Independent Motions
    - Longitudinal: Forward
    - Transverse: left / right
- Model
    - Outputs steering angle

Process

– – –

Raspberry Pi

Deep learning model

model input data

Data API

vision data

steering degree

Control API

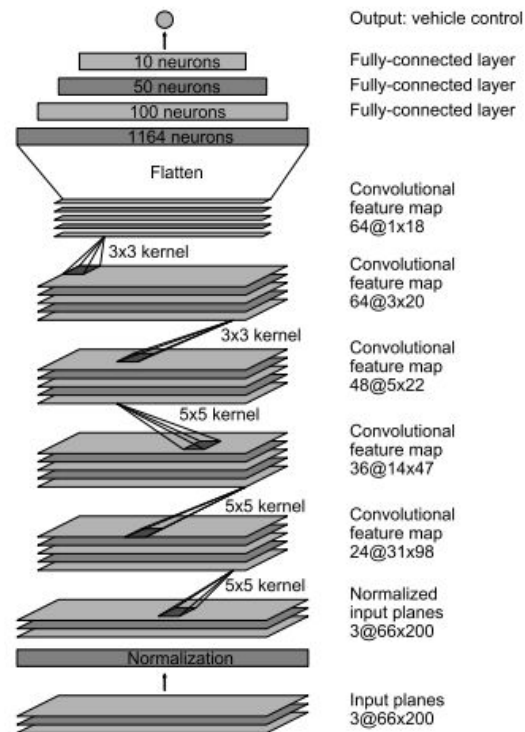control

Model Training

Figure 4: CNN architecture. The network has about 27 million connections and 250 thousand parameters.

Hardware-Software Correspondence

— — —

Pulse Width Modulation Induced Steering Angle

Left Wheel   Right Wheel

Steering Angle (Degree)

Pulse Width (Range 500-2500)

Average Steering Angle Between Two Wheels (Left Turn)

Pulse Width (Range 500-2500)   17.9*x + 1439 R² = 0.99

Pulse Width (Range 500-2500)

Steering Angle (Degree)

1450
1400
1350
1300
1250
1200
1150