Computer Vision for Pattern Recognition

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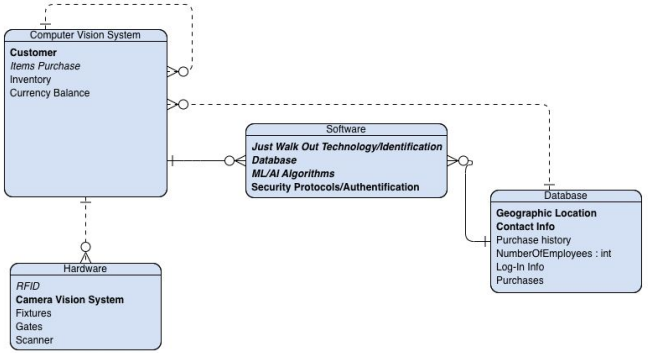
Recap

- Just Walk Out Technology Fail
- The Concept of Business Perspective vs Technical Analysis Interpretation
- Use Case Requirements of a CV System
- Functional Analysis of the Digital Ecosystem
- Optimal Trade Off in CV System
  - Depth Camera and Load Sensors
  - RGB Cameras with Palm Scanning



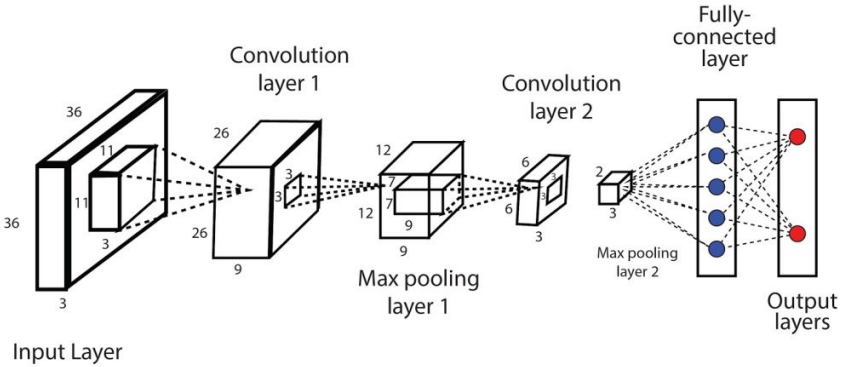
Convolution Neural Network

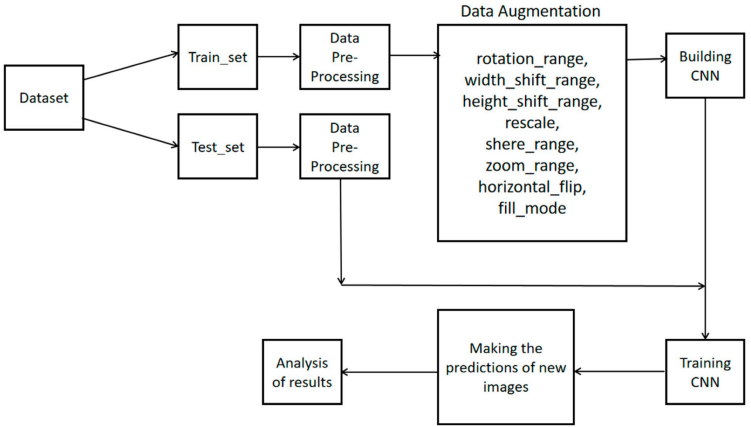
Convolutional Layer: Simplify complex images and objects through a filtering process within the network.

Polling Layer: Reduce the sample size of a particular feature map. Aiding in Feature abstractions.

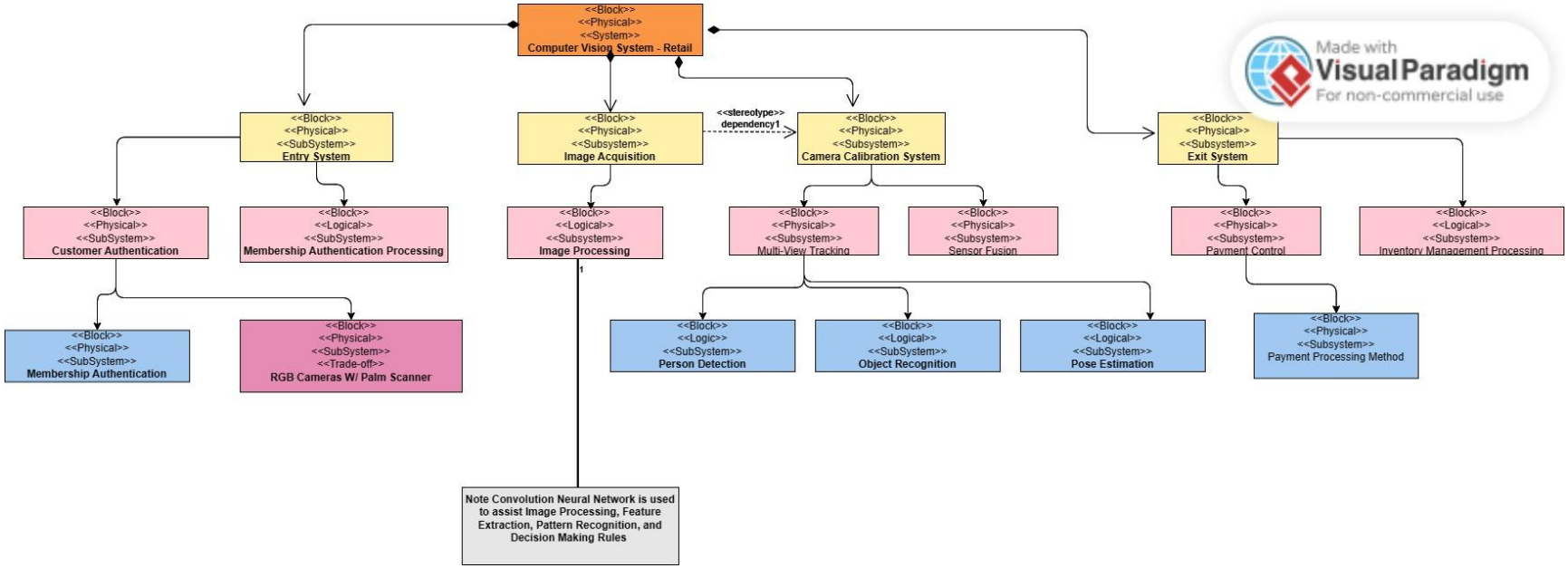
Rectified Linear Unit Layer (RELU): Serves as an activation function, ensuring non-linearity in the processing of data.

Fully Connected Layer: classification of the image by connecting every neuron to every neuron in the preceding layer.

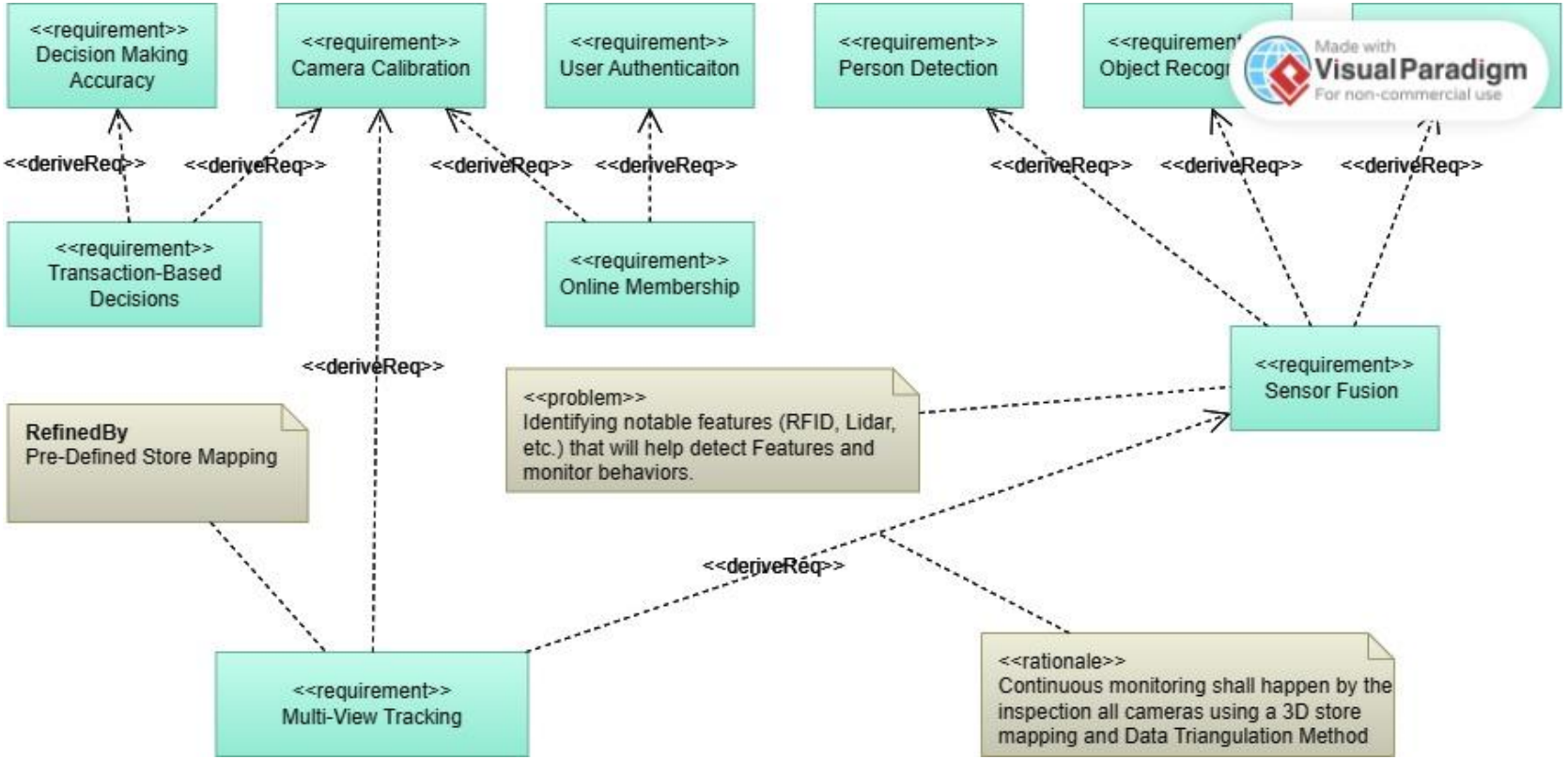




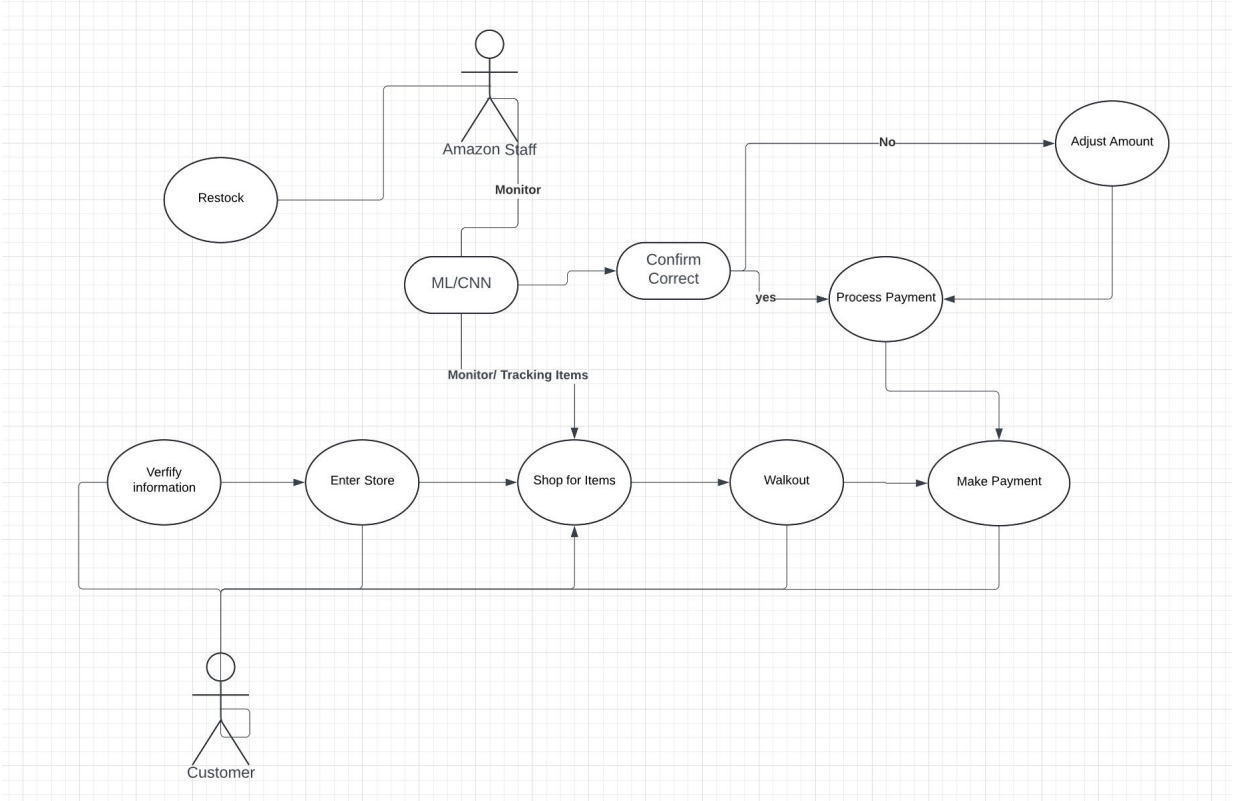
SysML Block Diagram



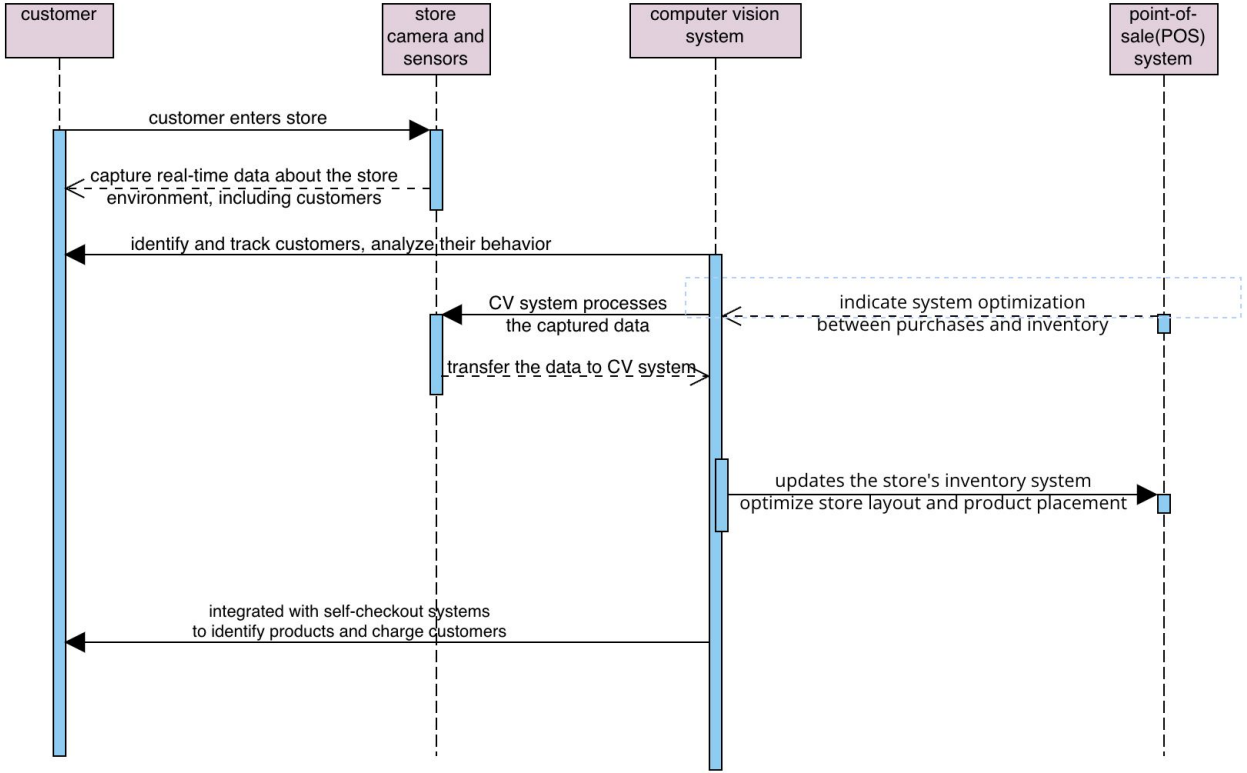
SysML Requirement Diagram



Use Case Diagram



Sequence Diagram



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