REACT-NATIVE

PÄR-ANTON WESTBOM

CADEC 2020.01.23 & 2020.01.29 | CALLISTAENTERPRISE.SE

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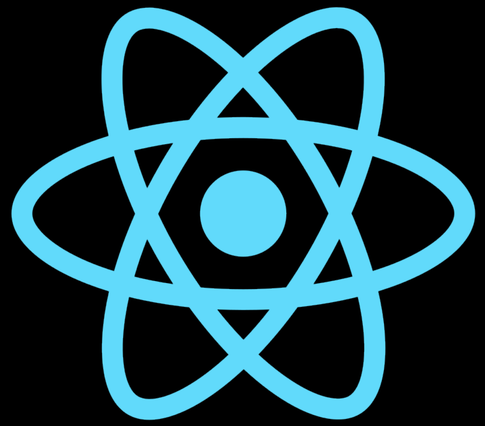
AGENDA

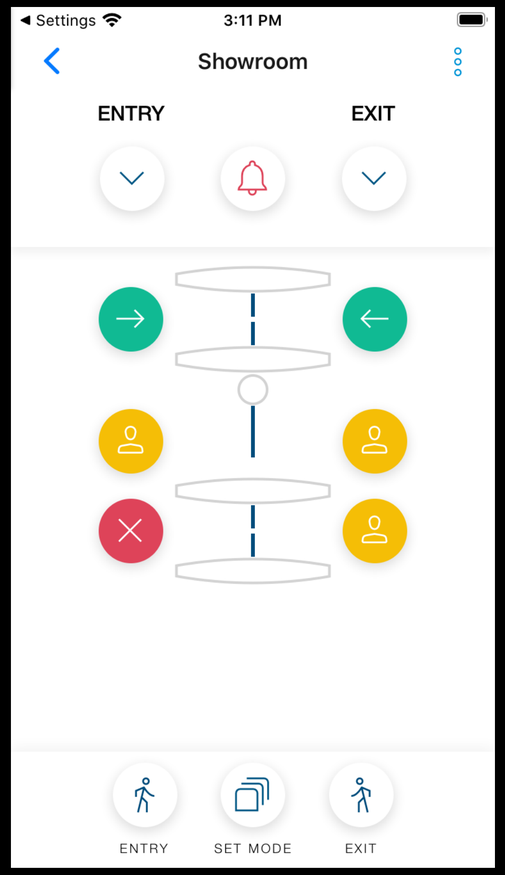
- What is React Native
- Demo of our app with React Native
- Why we choose React Native
- Demo of React Native Development

REACT NATIVE IN A NUTSHELL

- Released by Facebook in 2015
- Open Source
- Cross platform
- True native not a hybrid
- JS and CSS skills
- React Native brings React to mobile app development



ENTRANCE GATES FOR GUNNEBO



CALLISTA

DEMO

INPUT TO TECHNICAL DECISION

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- React/Web skills

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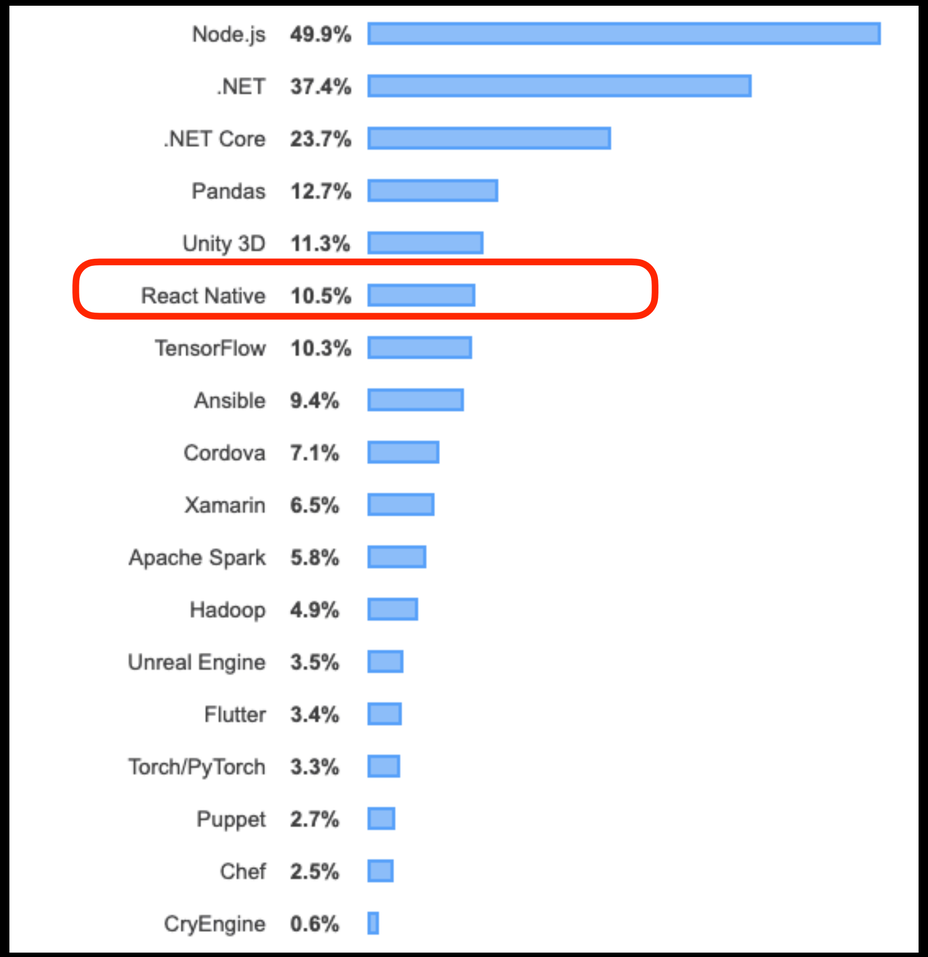
SOME CROSS PLATFORM FRAMEWORK

OTHER FRAMEWORKS (EXCEPT WEB), LIBRARIES AND TOOLS

StackOverflows yearly survey (2019) 90 000 Answers



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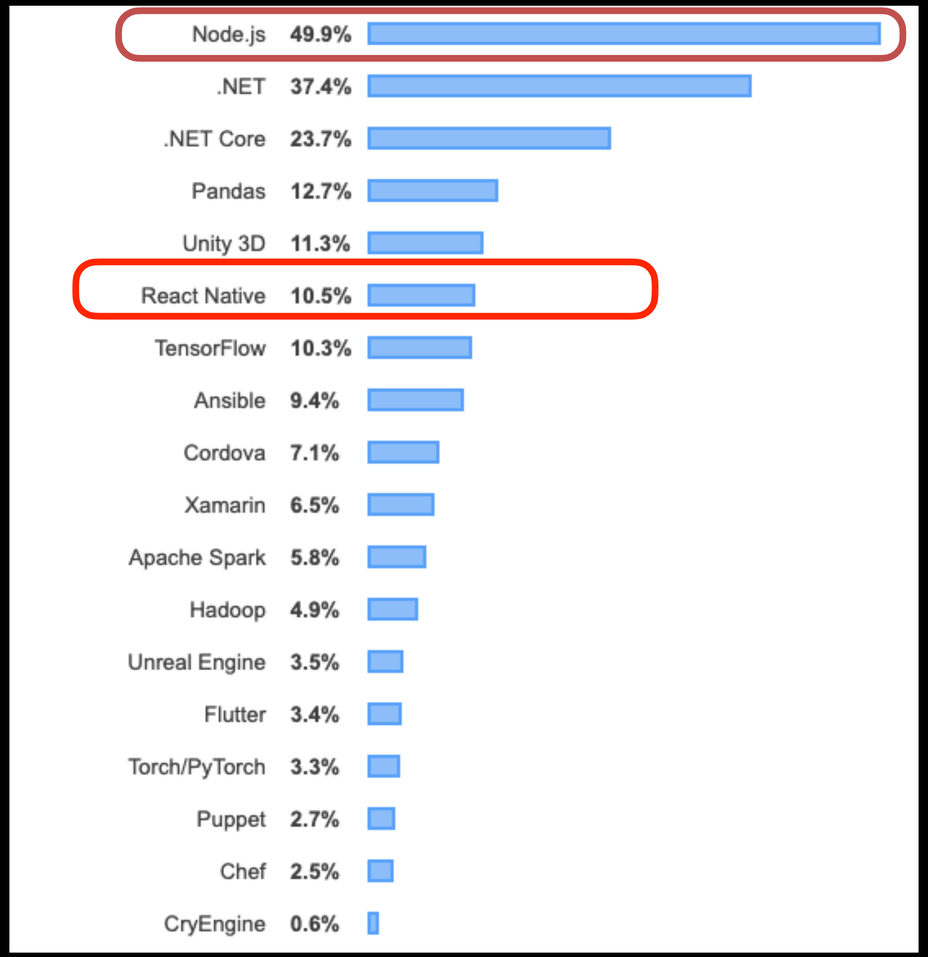

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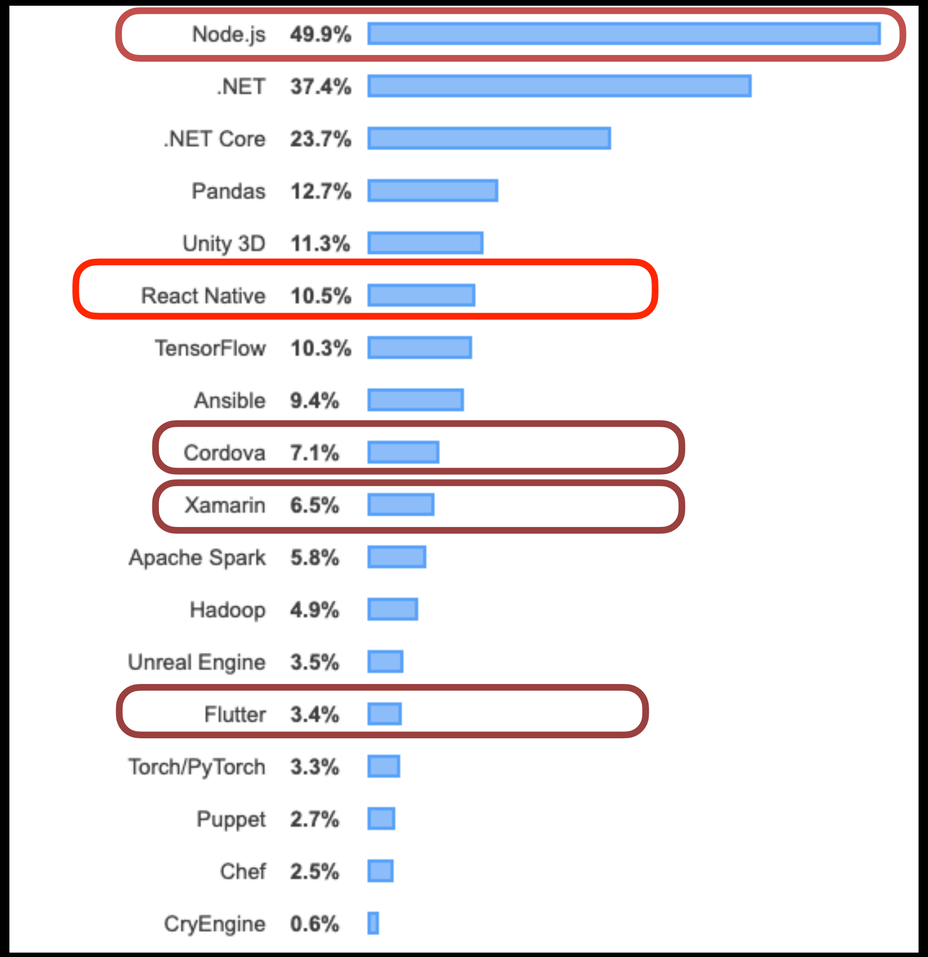

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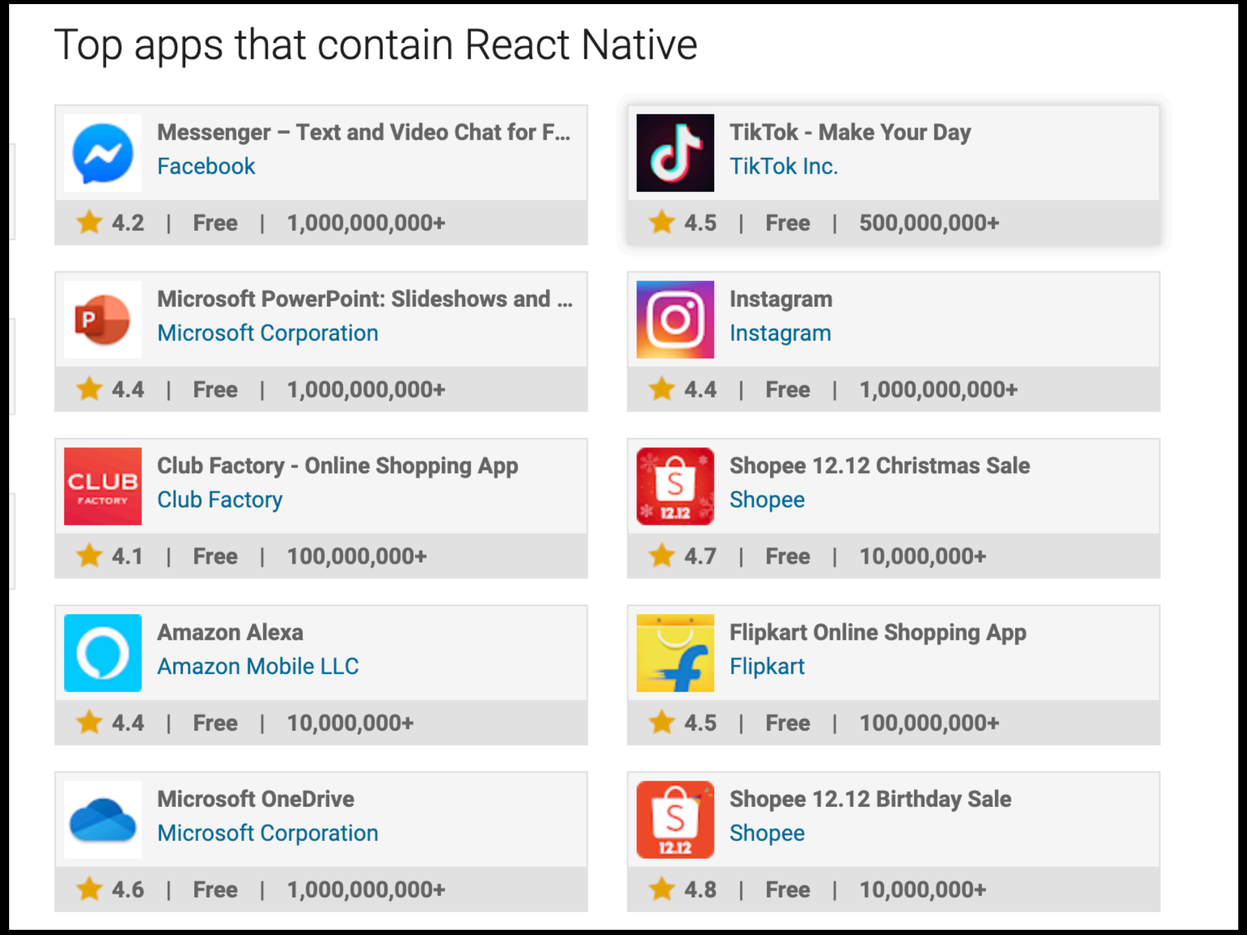

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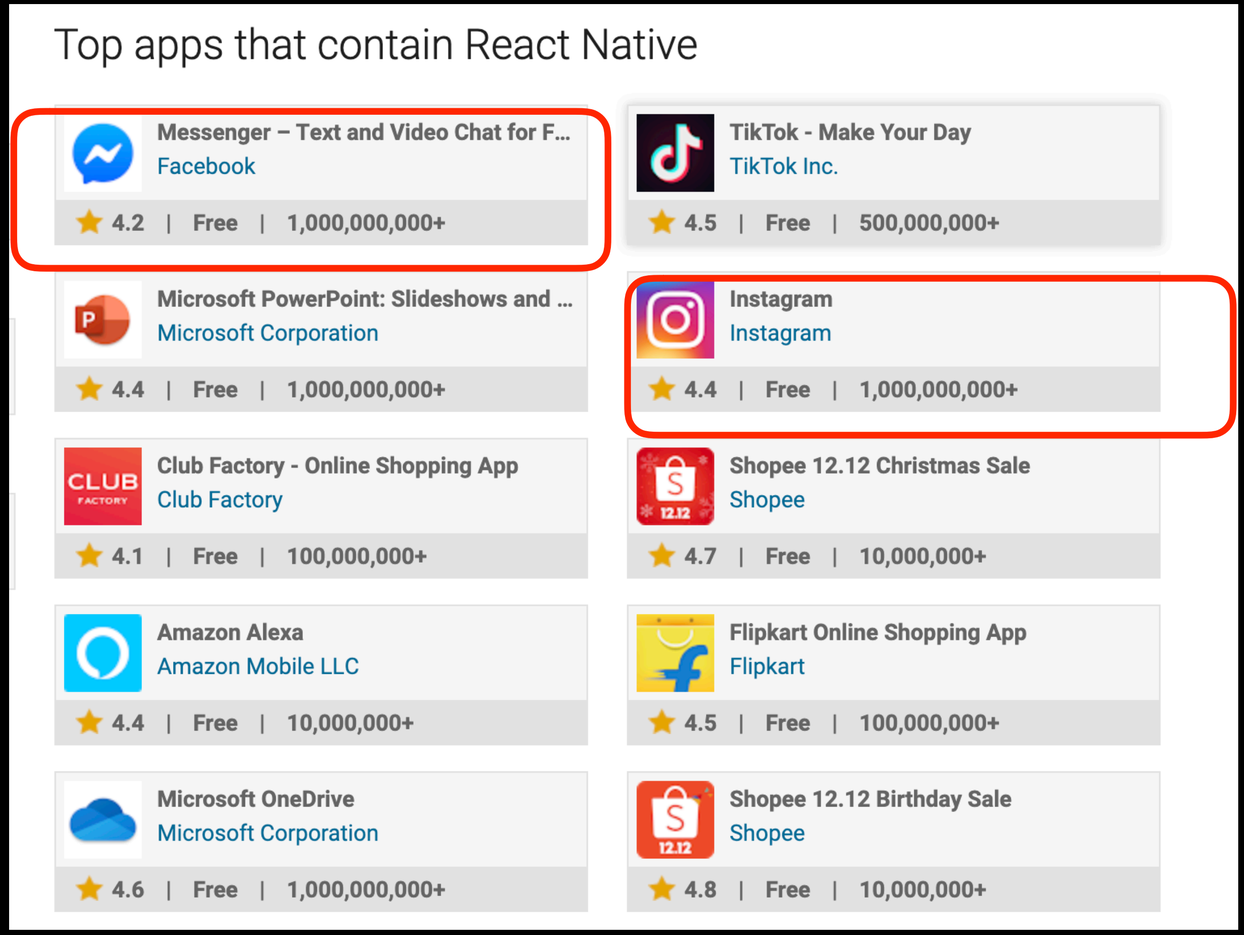

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- *More control*

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PROS

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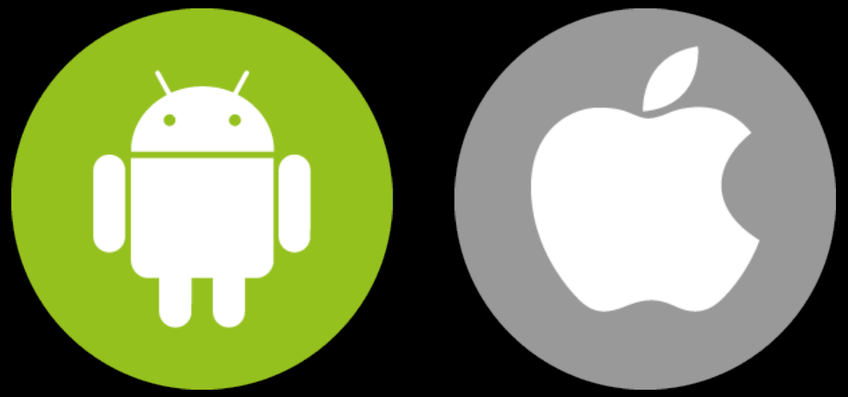
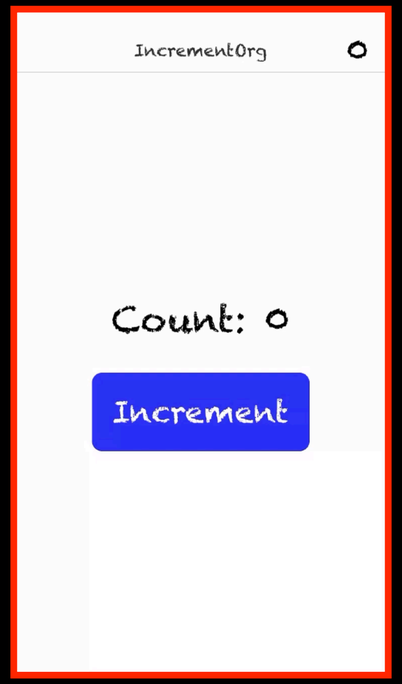
DECLARATIVE UI PROGRAMMING TREND DURING 2019



COUNTER VIEW EXAMPLE



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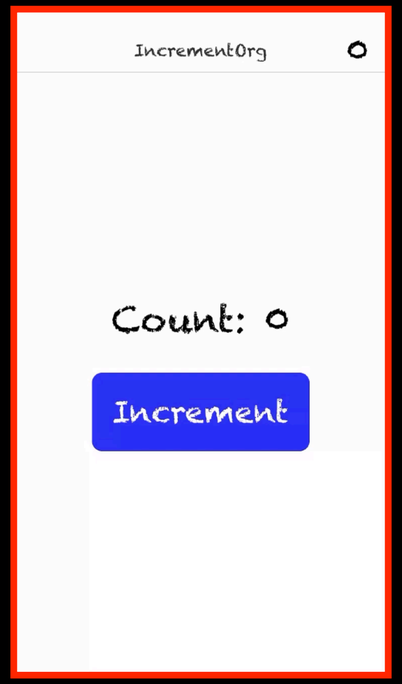
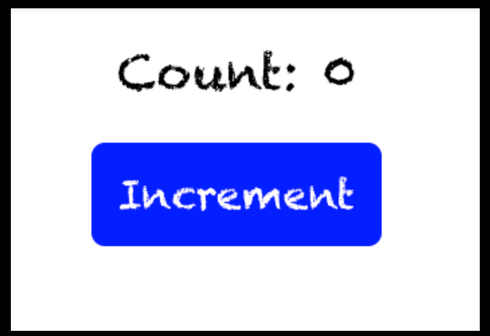


SWIFT UI (RELEASED SUMMER 2019) ANDROID COMPOSE (AUTUMN 2019)



SWIFT UI (RELEASED SUMMER 2019) ANDROID COMPOSE (AUTUMN 2019)


```
class CounterView extends React.Component {
  state = { counter: 0 };

  increase() {
    const { counter } = this.state;
    this.setState({ counter: (counter + 1) });
  }

  render() {
    const { counter } = this.state;
    return (
      <View>
        <Text> {`Count: ${counter}`}</Text>
        <Button
          title="Increment"
          onPress={() => this.increase()}
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      </View>
    );
  }
}
```

SWIFT UI (RELEASED SUMMER 2019) ANDROID COMPOSE (AUTUMN 2019)

```swift
// SWIFT UI (IOS)
struct CounterView : View {
@State var counter = 0

 func increase () {
     counter += 1
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 var body: some View {
     VStack {
         Text("Count: \(counter)")
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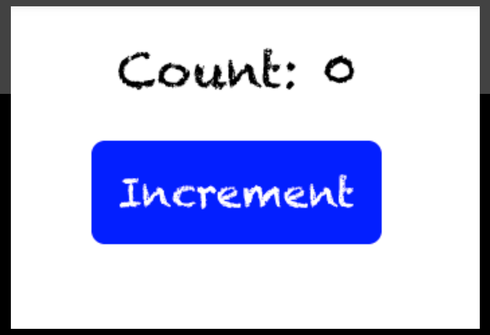


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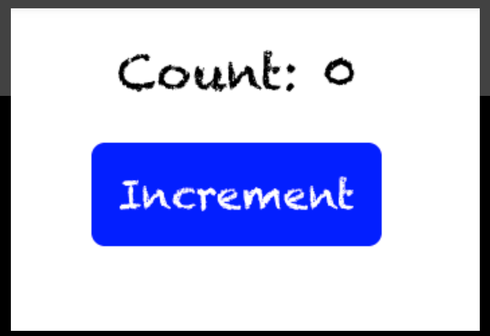

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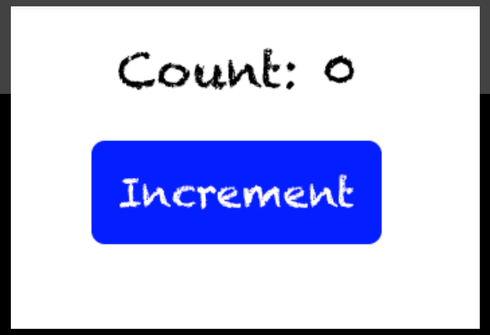


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SWIFT UI (RELEASED SUMMER 2019) ANDROID COMPOSE (AUTUMN 2019)

```
// Android compose
@Composable
fun CounterView() {

    val counter = +state { 0 }

    Center {

      Column {

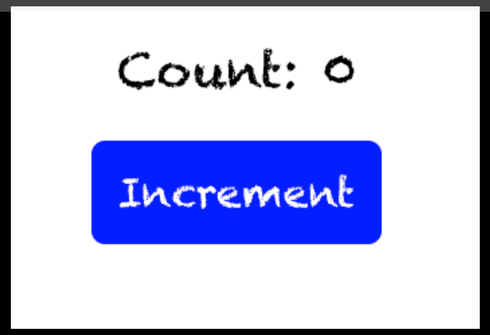
        Text("count: ${counter.value}")

        Button("Increment", onClick = {counter.value++})

      }

    }

}
```

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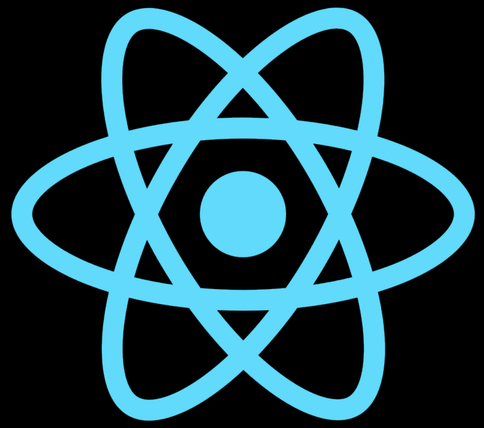
OUR PROJECT USING REACT NATIVE AND ...



CADEC HISTORY OF FRONT-END

Stephen White

2016 GRAPHQL

2018 REACT-NATIVE

2019 REACT HOOKS

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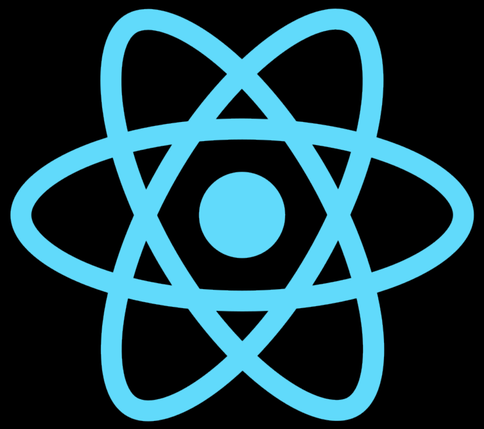

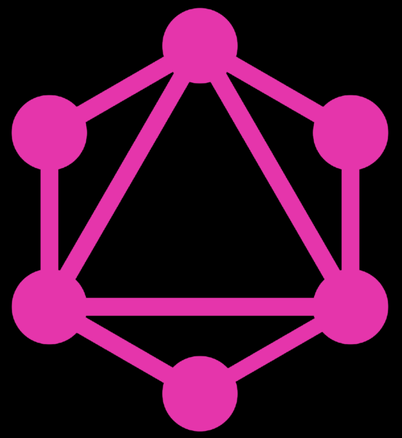

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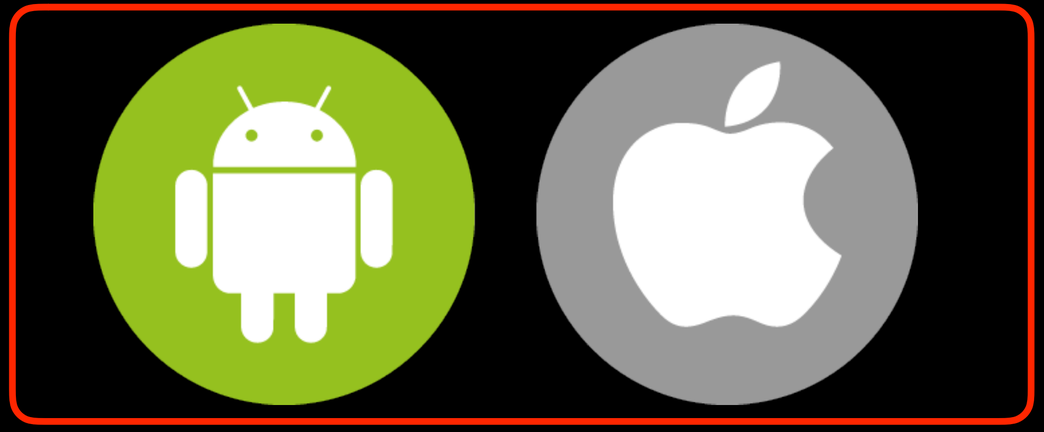

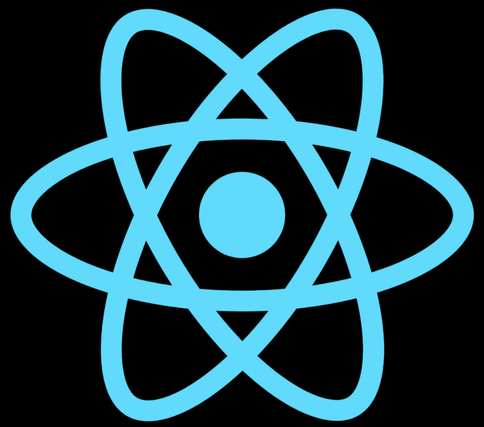

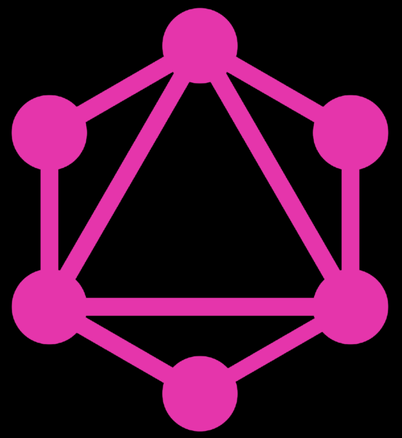

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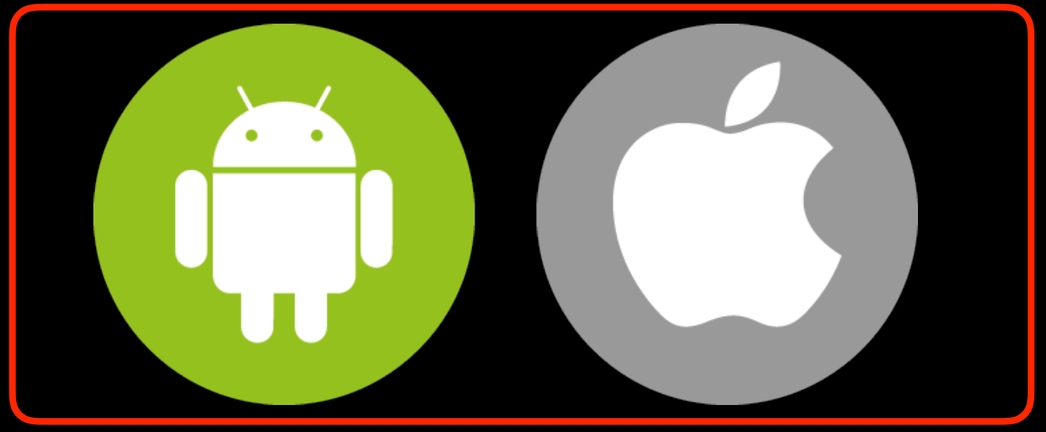

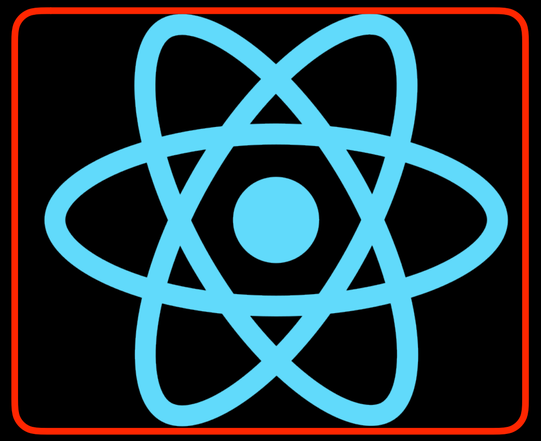

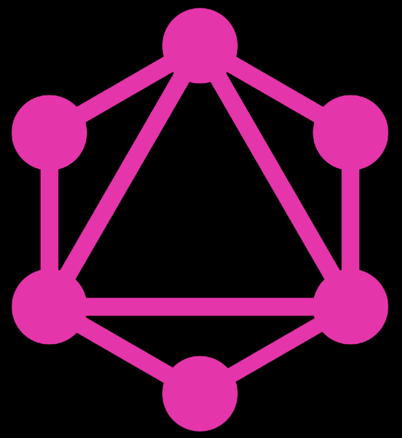

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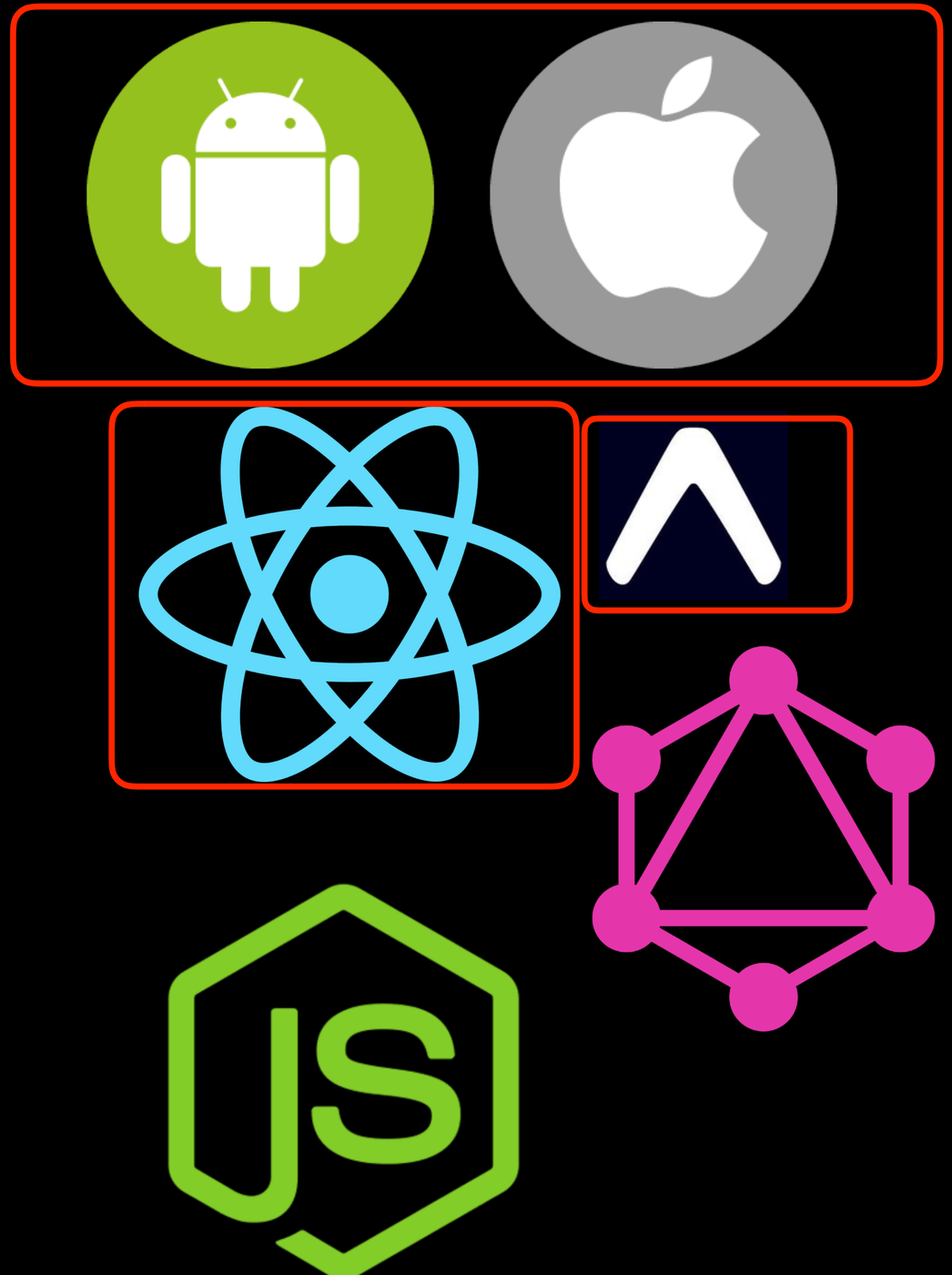

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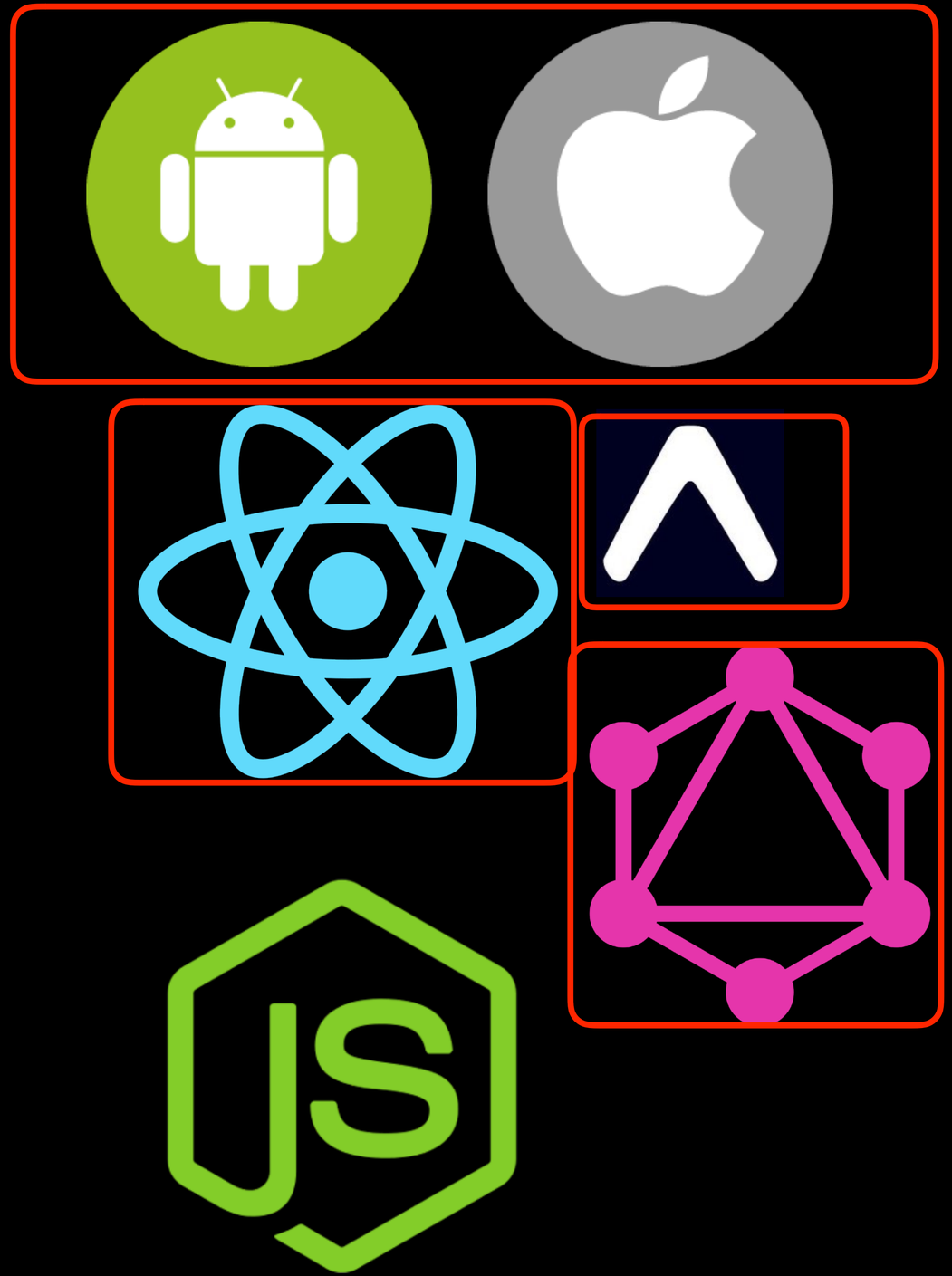

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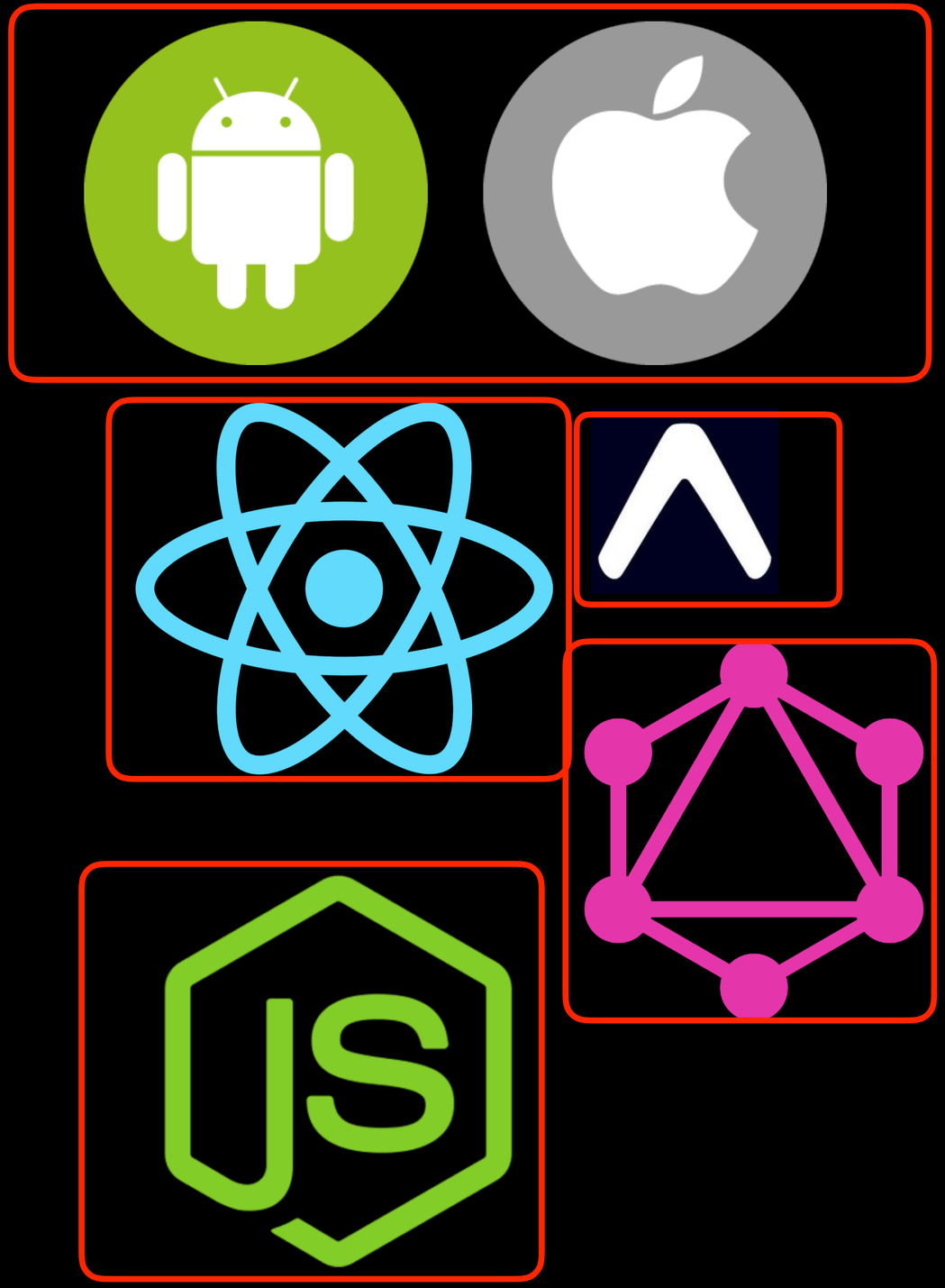

CALLISTA

600 JS FILES, ONLY 9 HAVE SOME PLATFORM SPECIFIC CODE

```
const welcome = Platform.select({
  ios: `Dear iOS user`,
  android: `Dear android user`,
});

// OR File extension example myfile.android.js


// More info on https://facebook.github.io/react-native/docs/platform-specific-code
```

NAVIGATION

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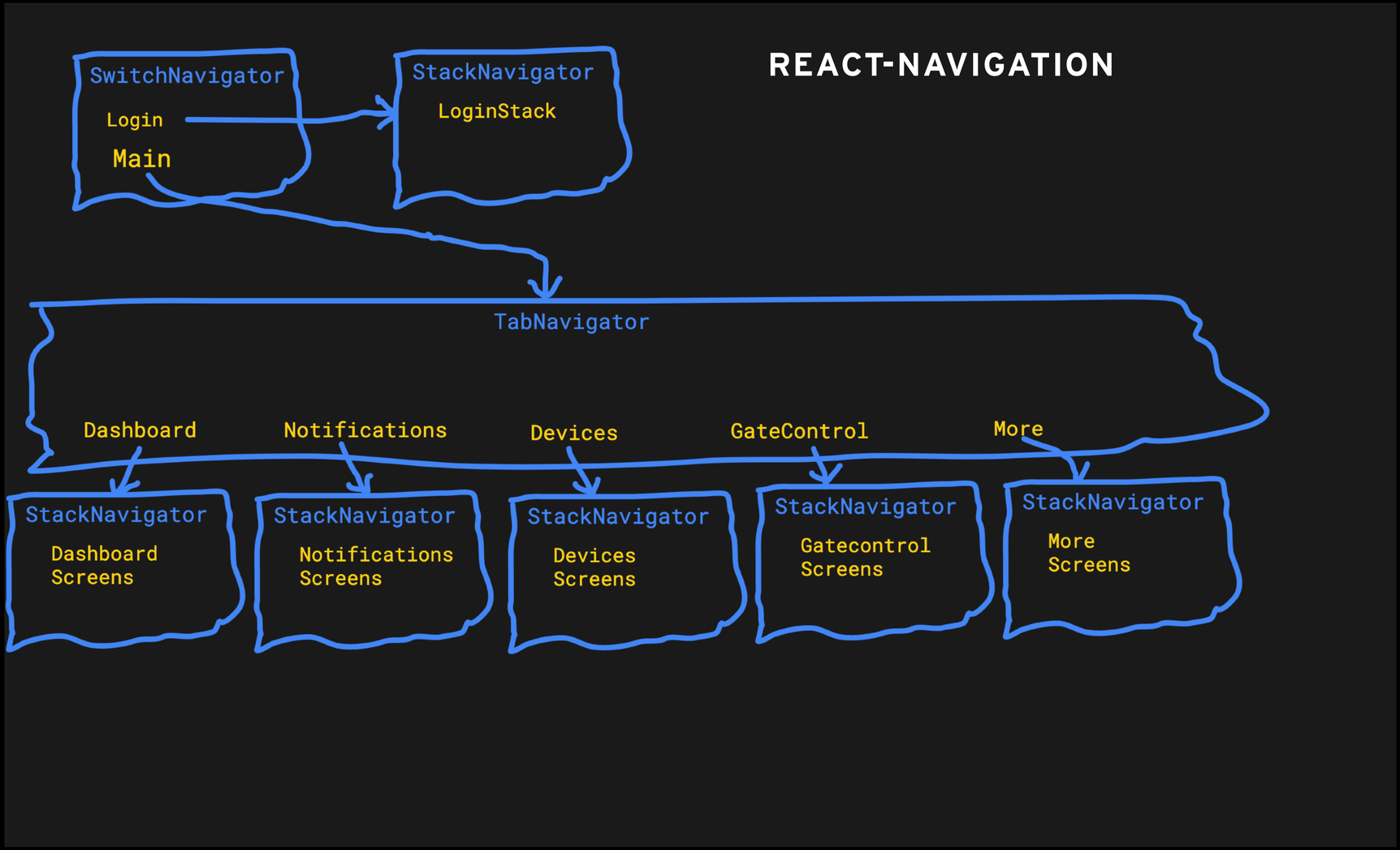
REACT-NAVIGATION
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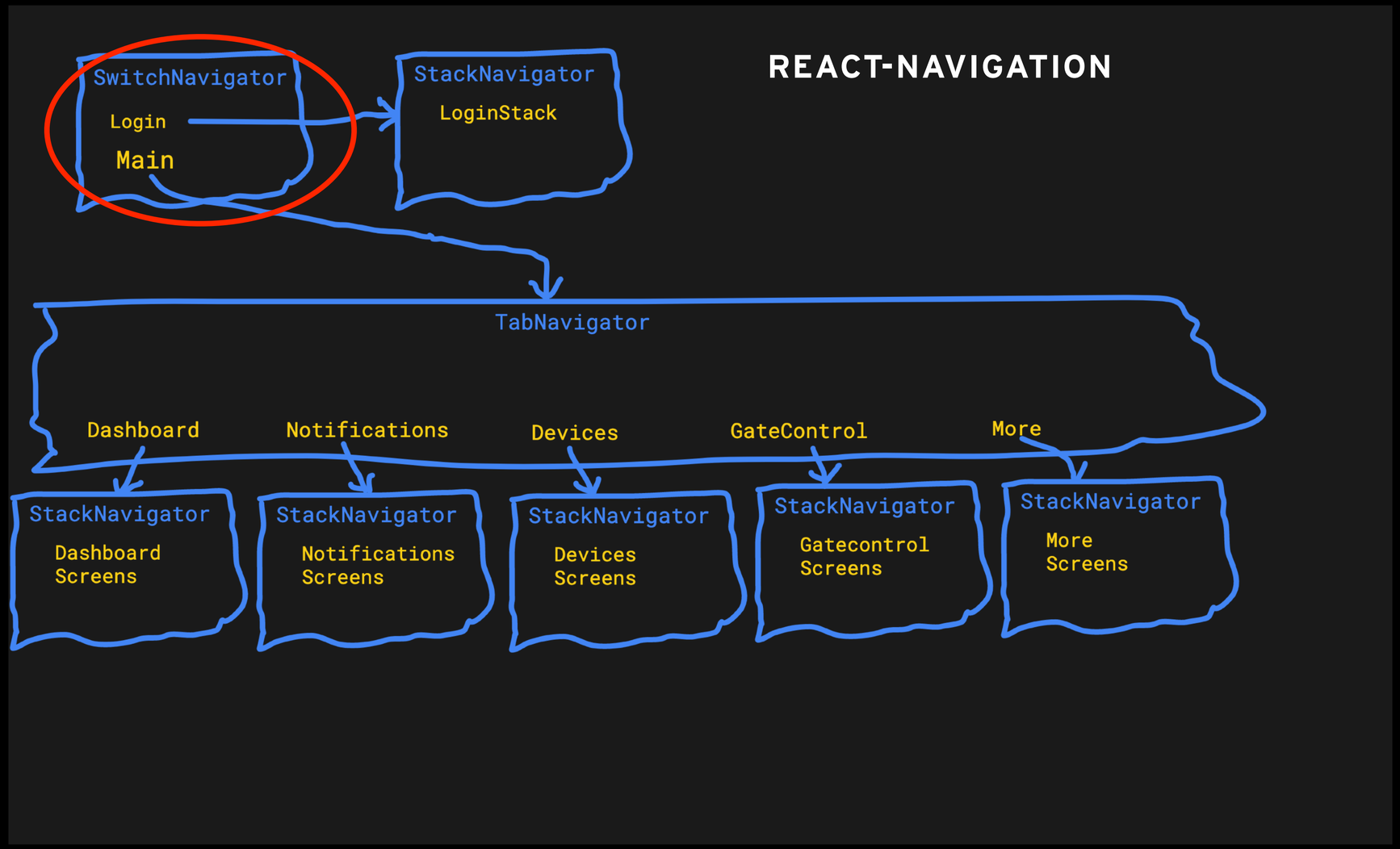
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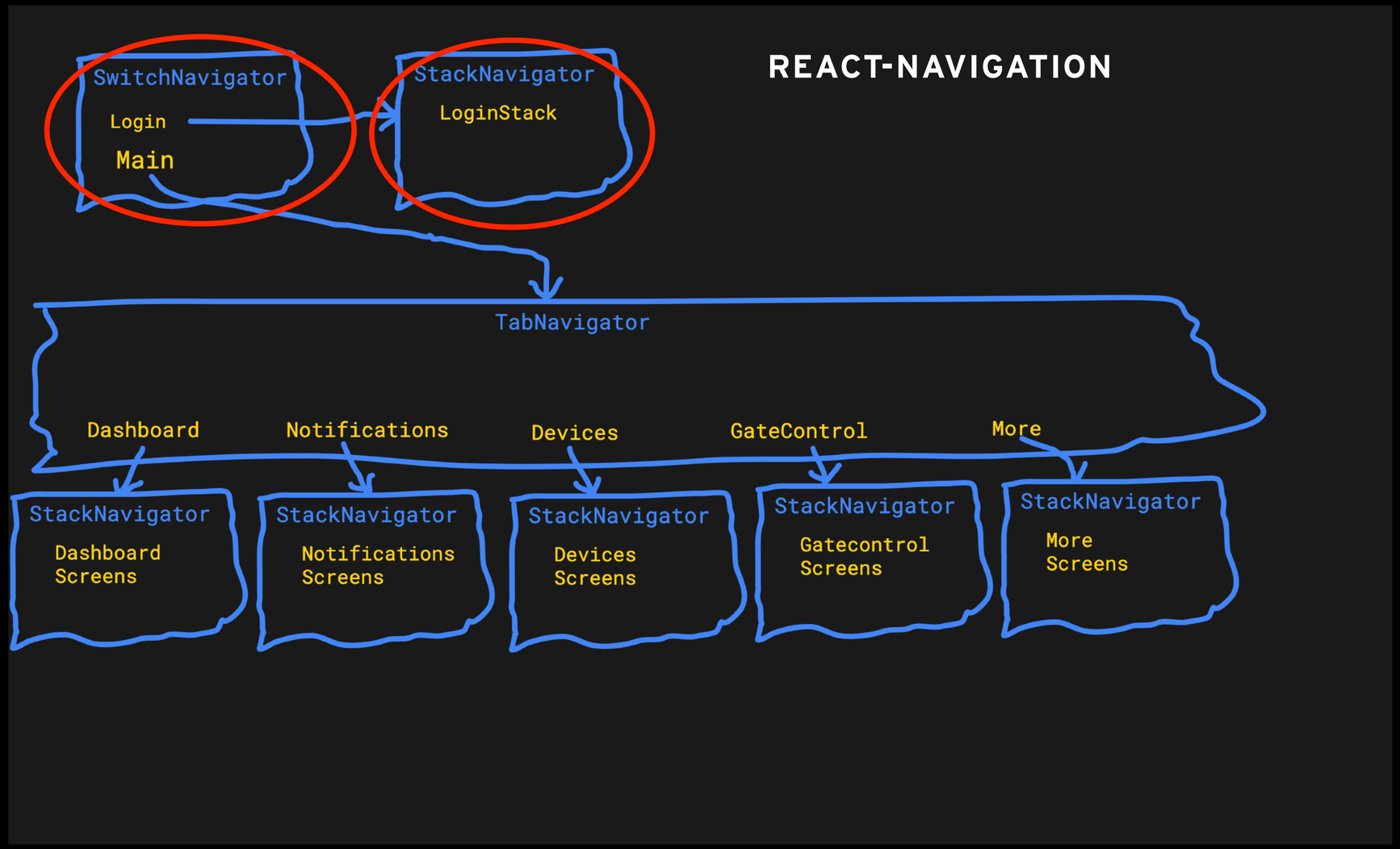
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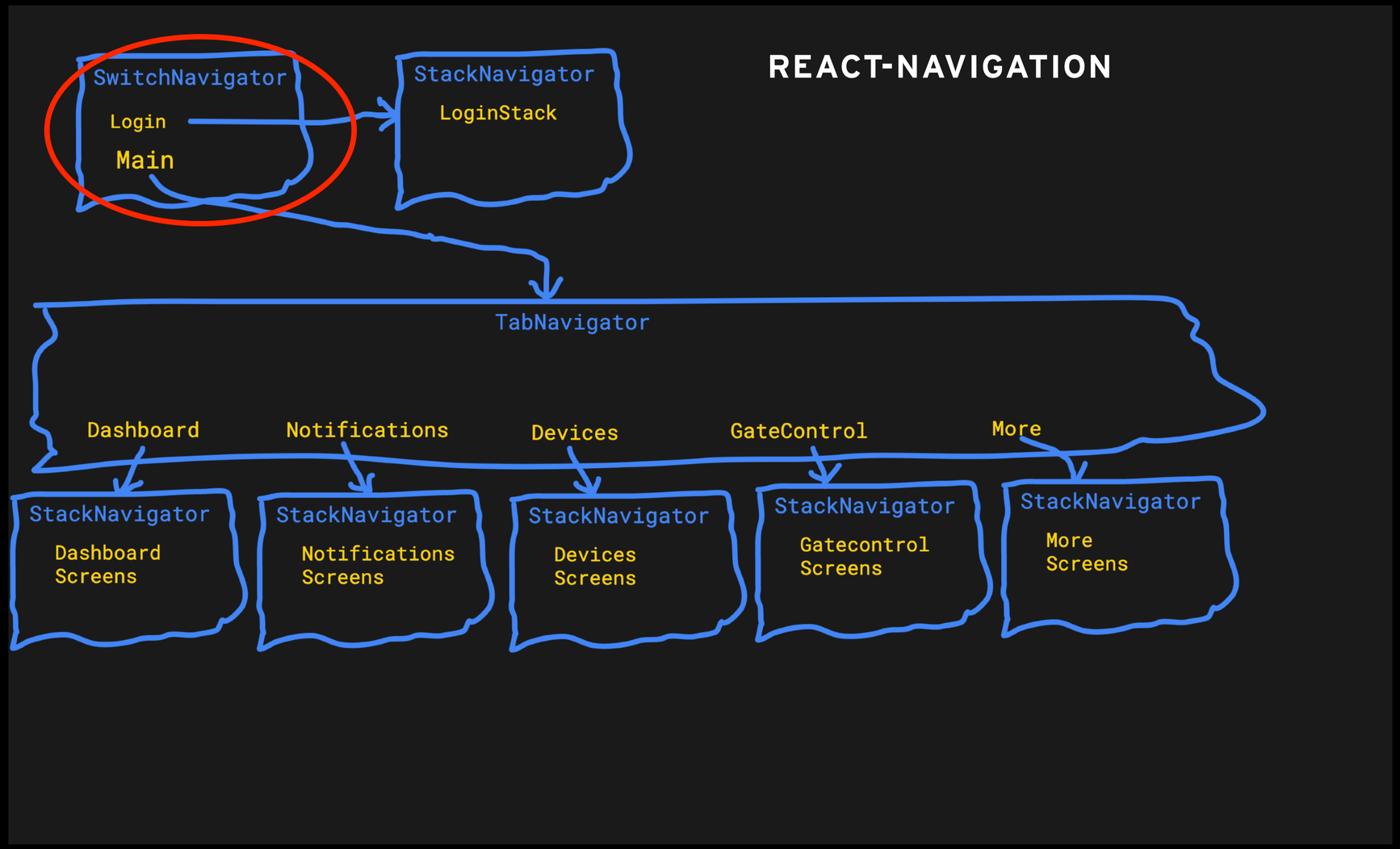
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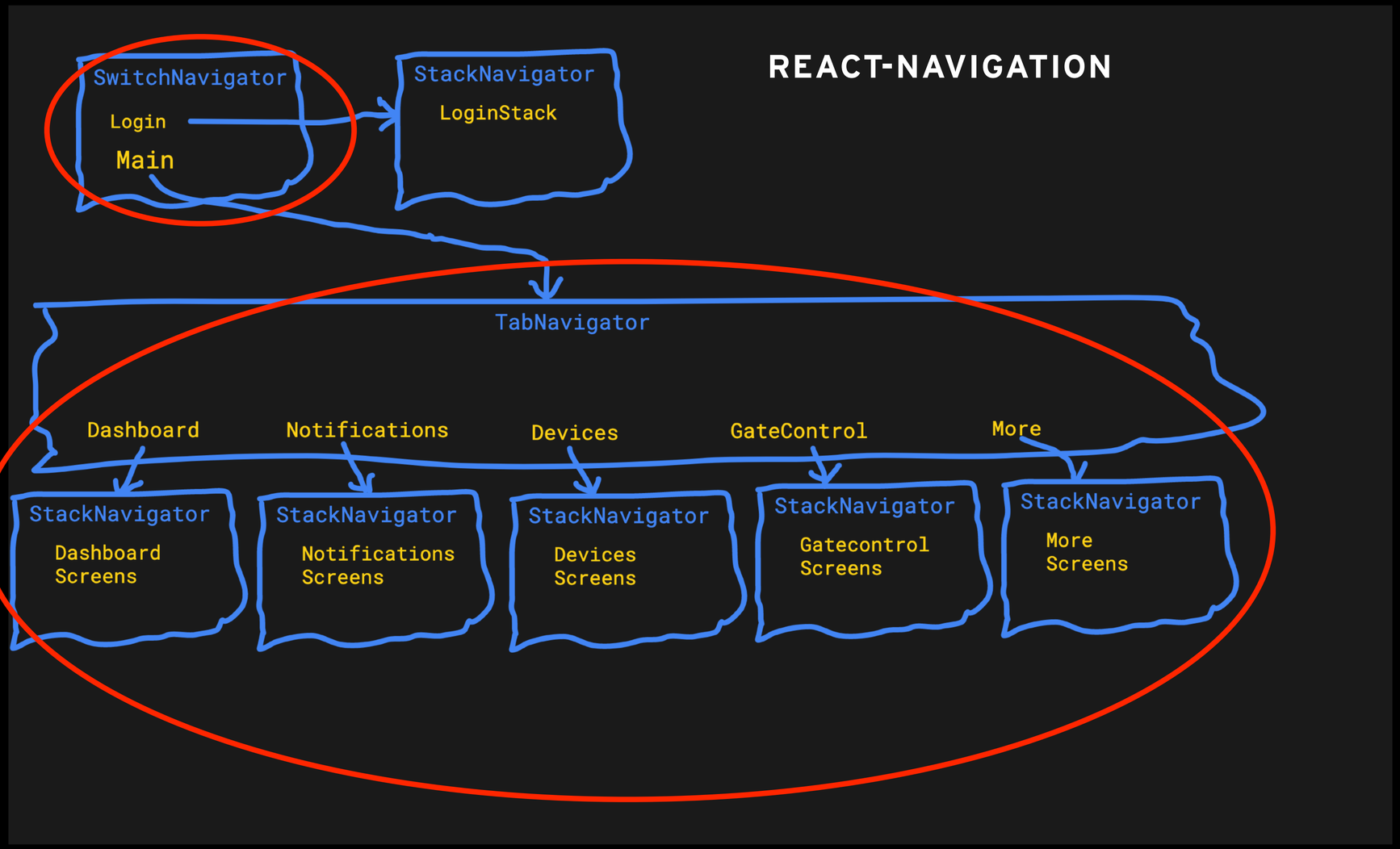
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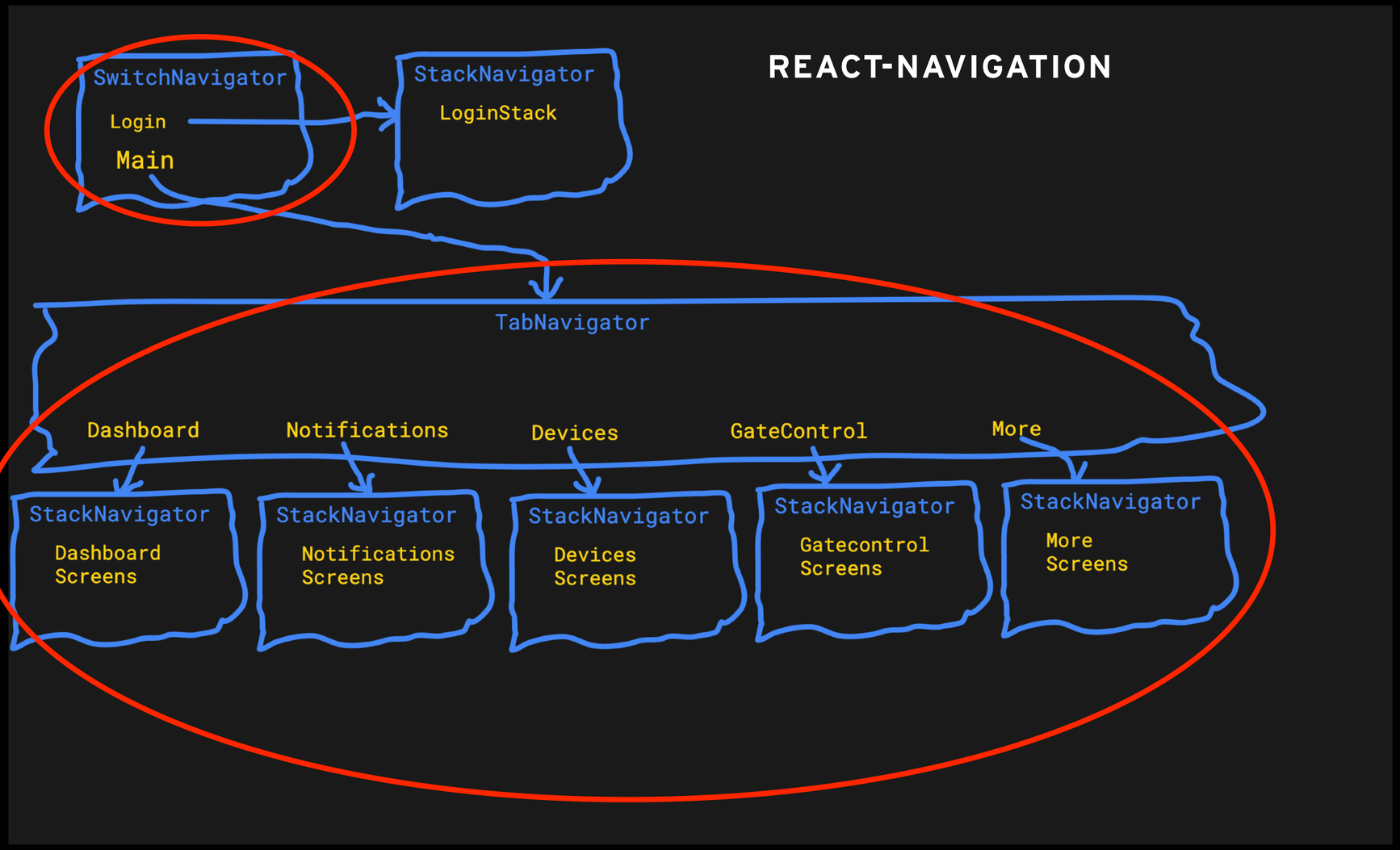
Dashboard Screens
StackNavigator
Notifications Screens
StackNavigator
Devices Screens
StackNavigator
Gatecontrol Screens
StackNavigator
More Screens

NAVIGATION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StackNavigator
LoginStack
TabNavigator
Dashboard
Notifications
Devices
GateControl
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Dashboard Screens
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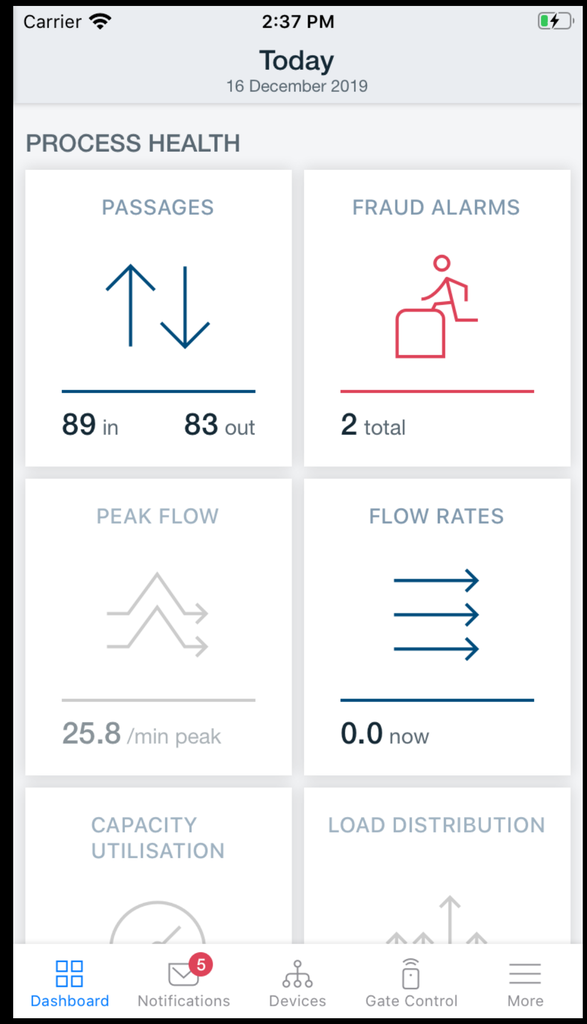
More Screens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Today
16 December 2019
PROCESS HEALTH
PASSAGES
89 in
83 out
FRAUD ALARMS
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PEAK FLOW
25.8 /min peak
FLOW RATES
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CAPACITY UTILISATION
LOAD DISTRIBUTION
Dashboard
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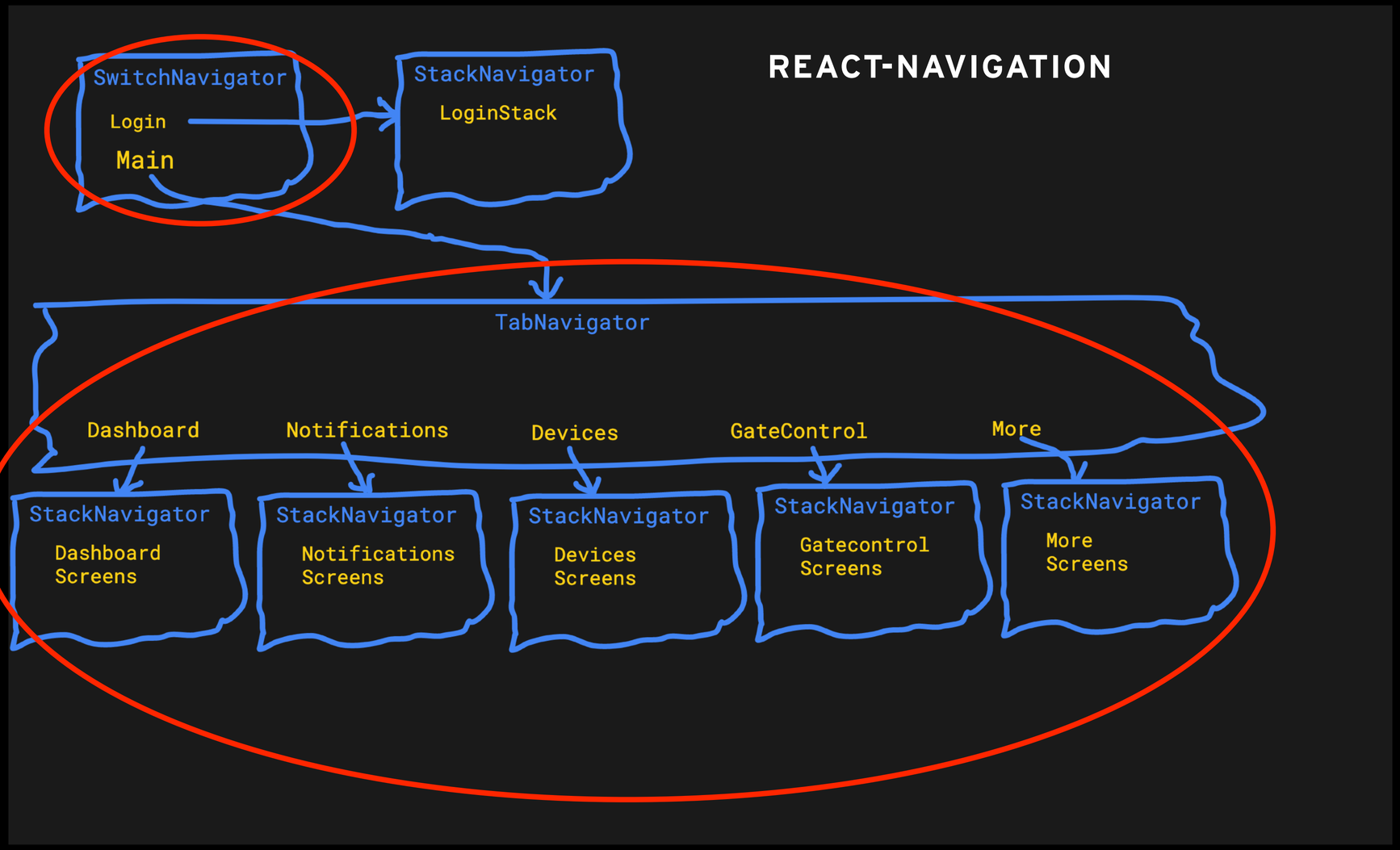
Devices
Gate Control
More

NAVIGATION


REACT-NAVIGATION
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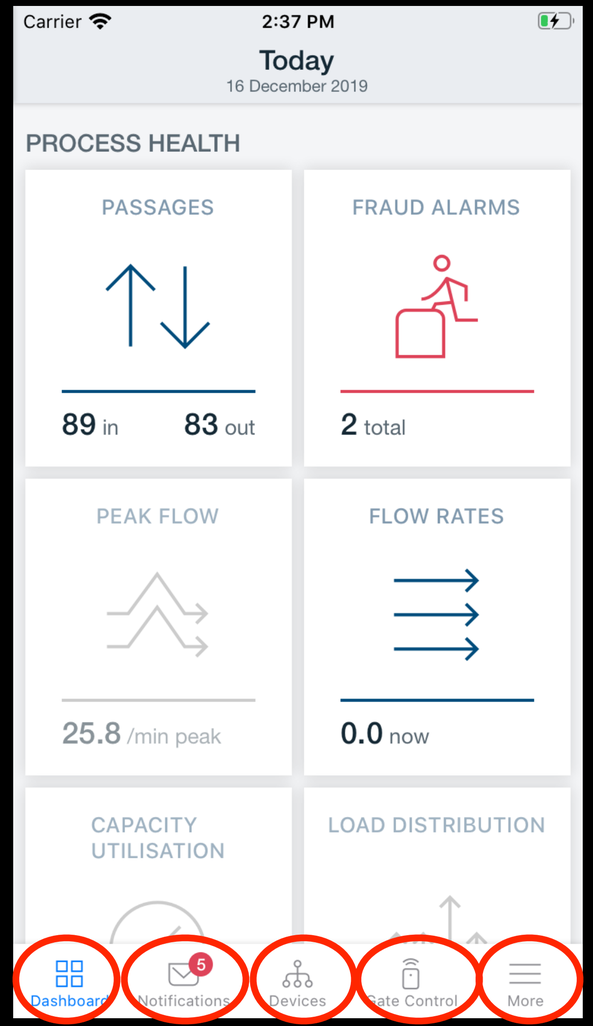
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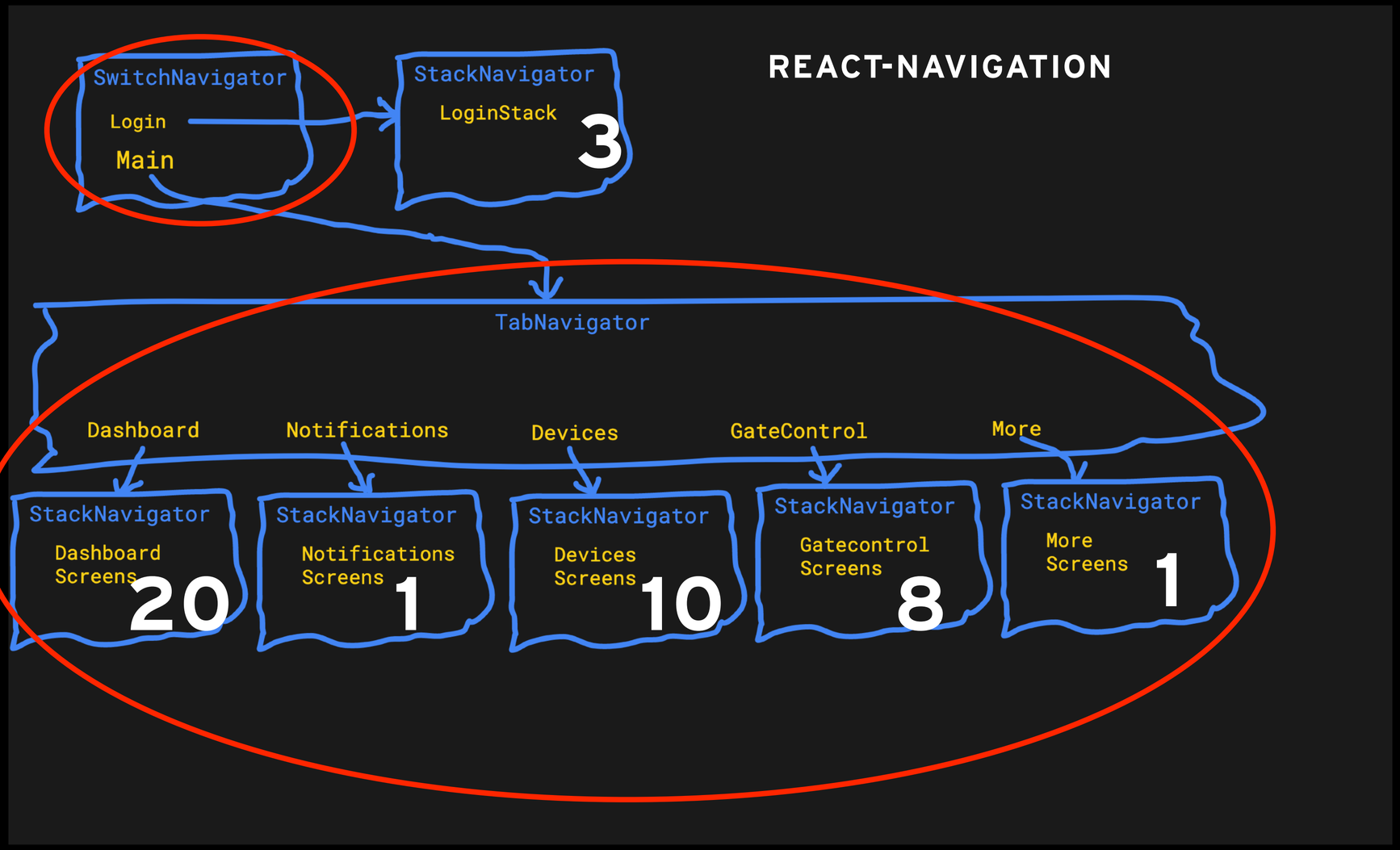
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TabNavigator
Dashboard
Notifications
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StackNavigator
Dashboard Screens
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Gatecontrol Screens
8
StackNavigator
More Screens
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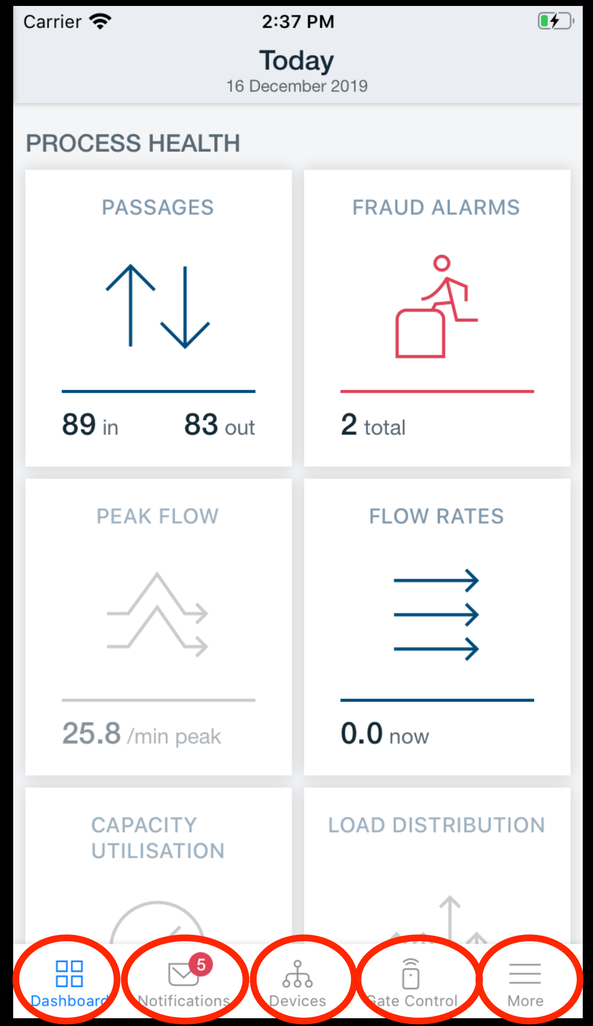
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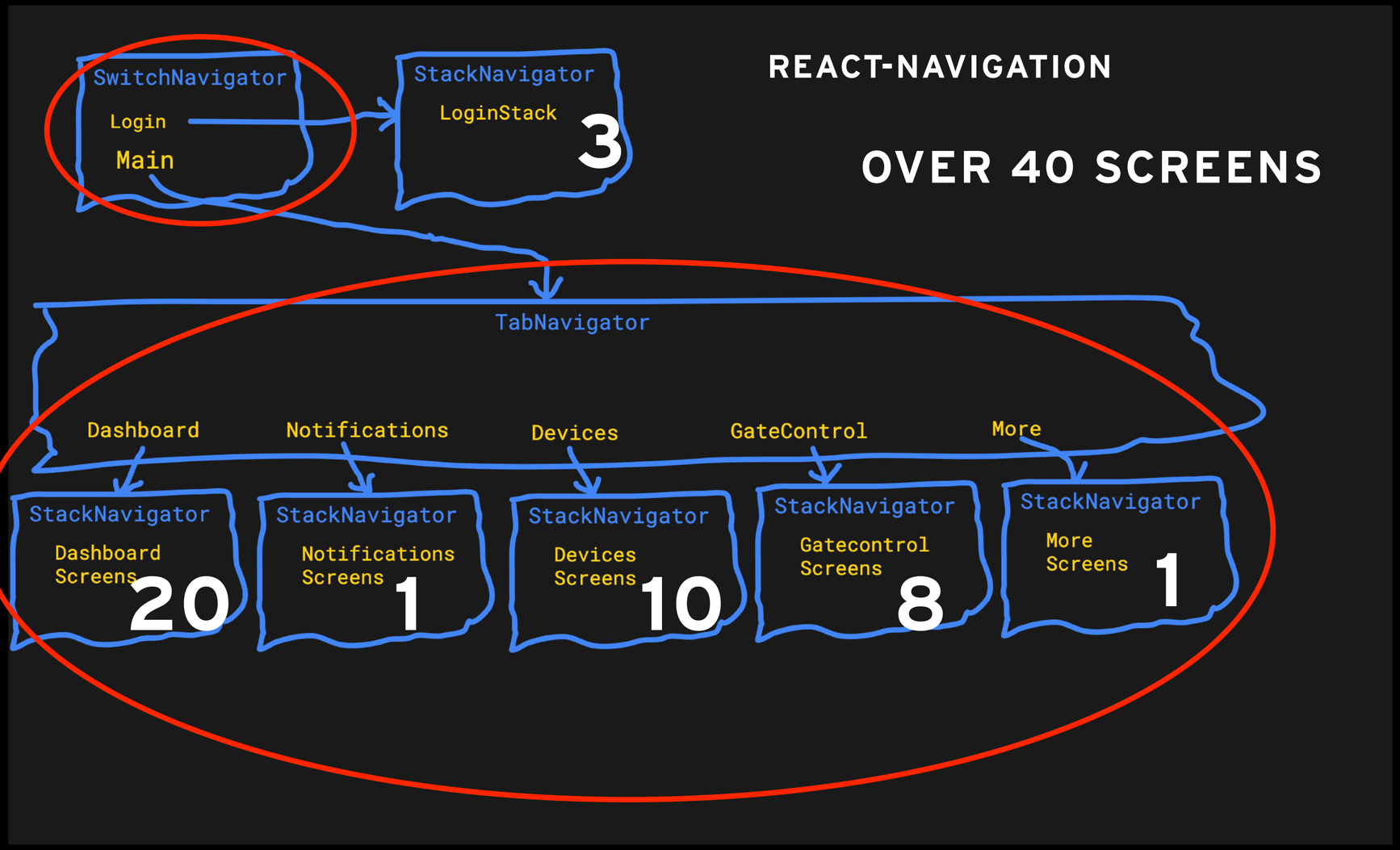
SwitchNavigator
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REACT-NAVIGATION
OVER 40 SCREENS
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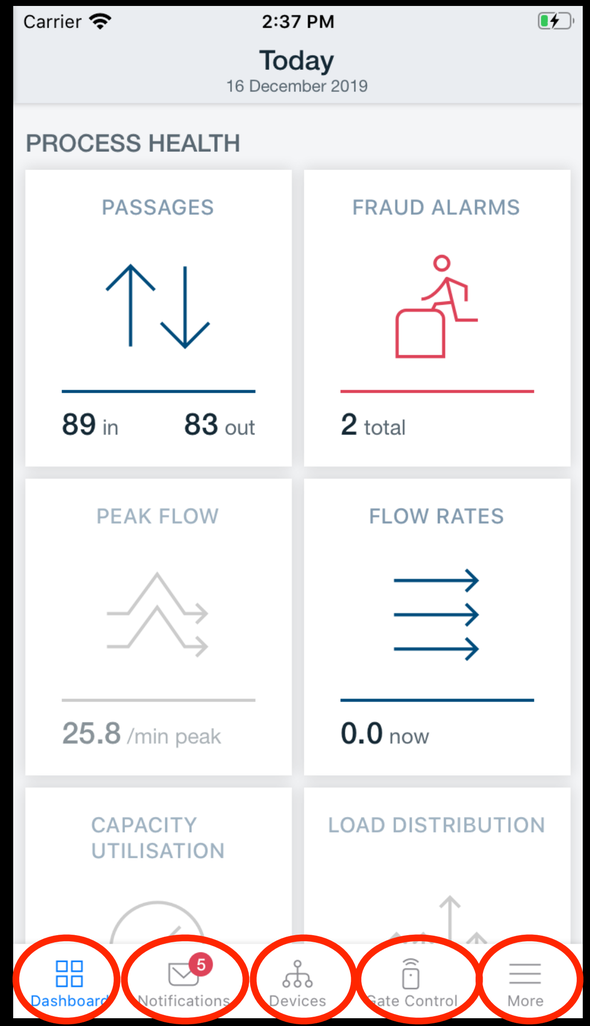
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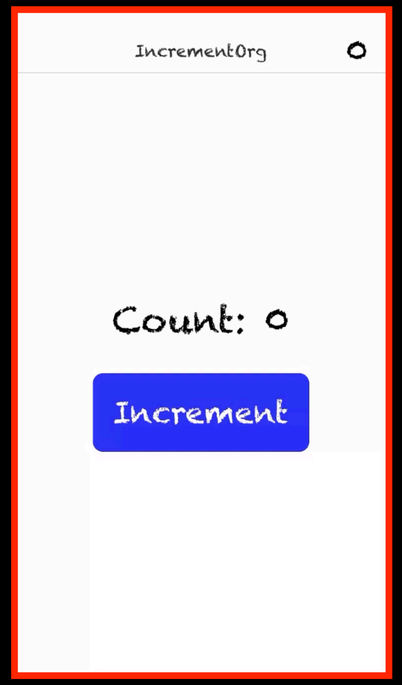
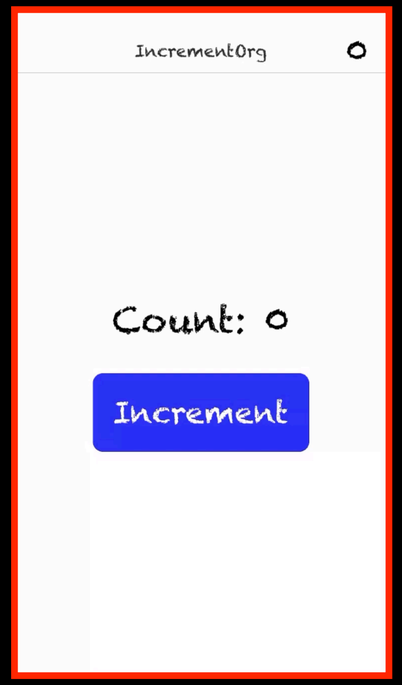
REACT NATIVE, EXPO AND REACT NAVIGATION, DEVELOPMENT



COUNTER DEMO

REACT NATIVE, EXPO AND REACT NAVIGATION, DEVELOPMENT



COUNTER DEMO

NATIVE APPS ON IOS

ANDERS FORSSELL

CADEC 2020.01.23 & 2020.01.29 | CALLISTAENTERPRISE.SE

CALLISTA

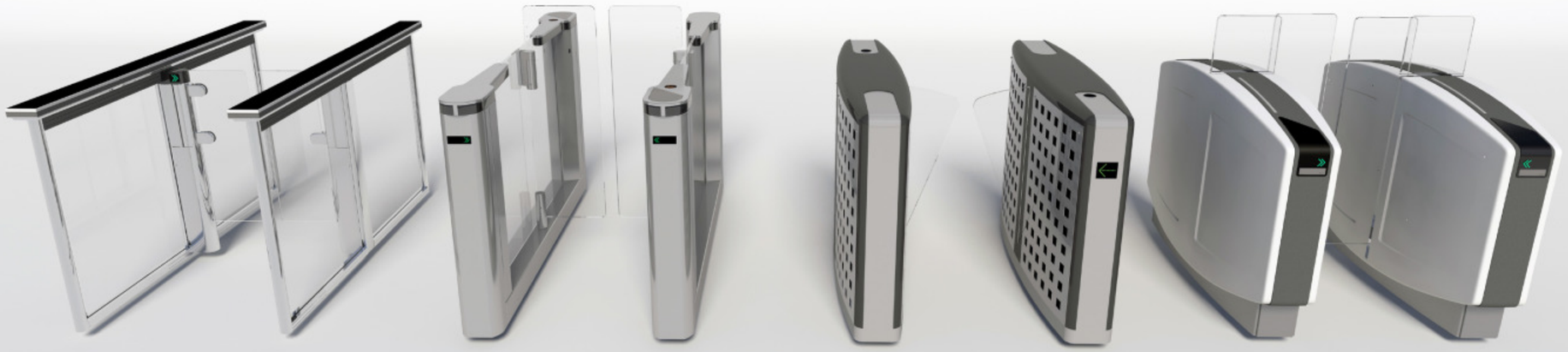
NATIVE APPS ON IOS

- Why would we go native?
- The native landscape on iOS
- The technology behind Augmented Reality
- What goes into making an AR-app?
- Demo

GUNNEBO®

For a safer world

SPEEDSTILE



FL^{S} SPEEDSTILE

FL SPEEDSTILE

BP SPEEDSTILE

FP SPEEDSTILE

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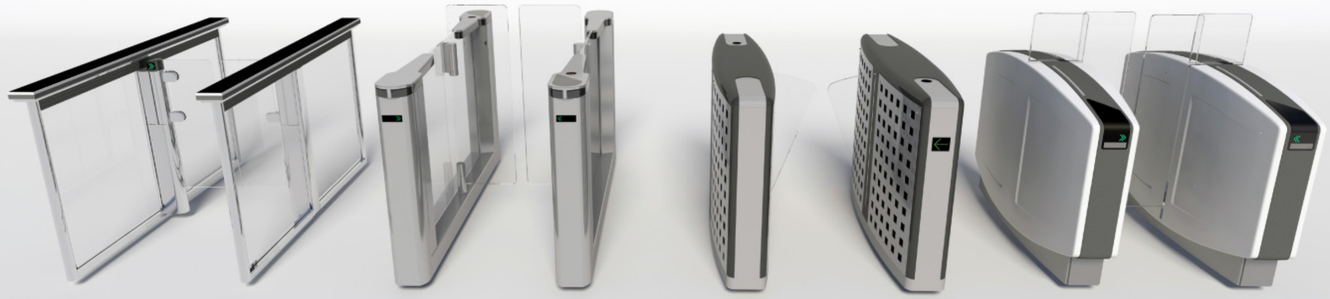

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- ☑ Limited resources (as always) - multi platform support inherently more expensive

THE NATIVE LANDSCAPE ON IOS

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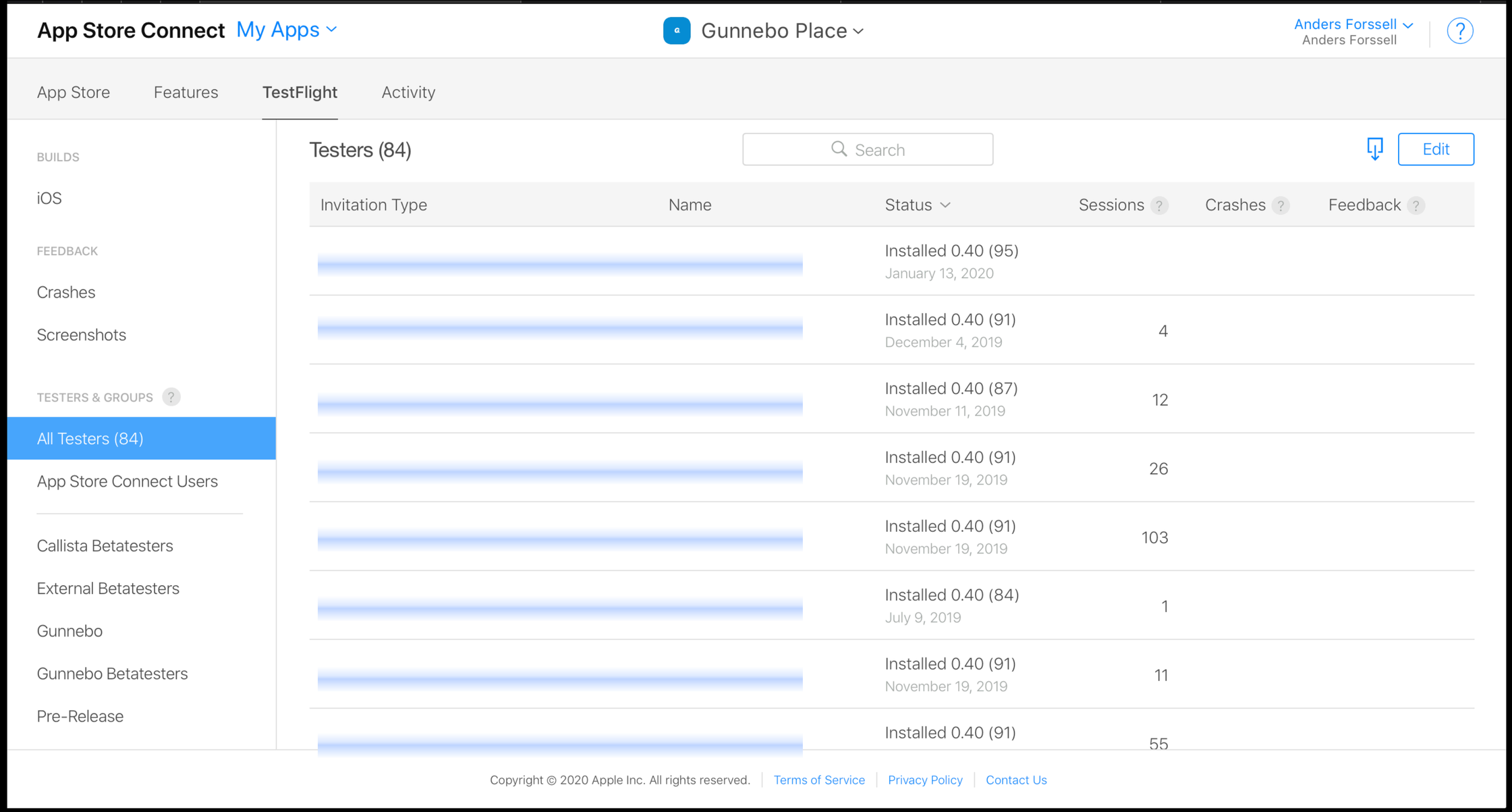
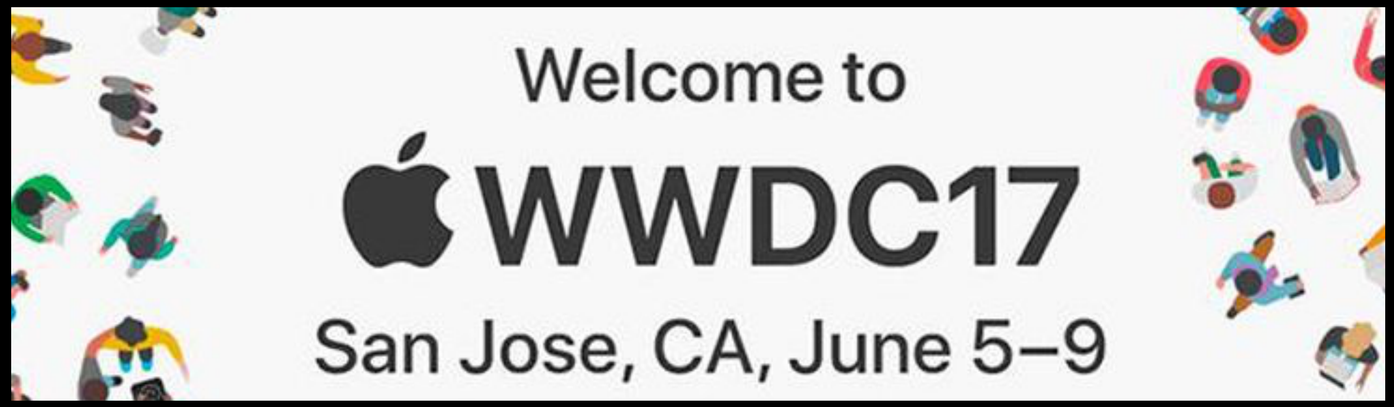
  - Deployment: TestFlight and AppStore Business App

APP DISTRIBUTION



ARKIT - RELEASED 2017



Fast, stable motion tracking
Plane estimation with basic boundaries
Ambient lighting estimation
Scale estimation
Support for Unity, Unreal, SceneKit
Xcode app templates

ARKIT - EVOLUTION

ARKit 1.0	ARKit 1.5	ARKit 2.0	ARKit 3.0
2017	2018 - spring	2018 - fall	2019
• World tracking • Horizontal planes 	• Improved tracking and video resolution • Vertical planes • Image detection	• Object detection • Image tracking • Save & Share world map	• People Occlusion • Body tracking • Multible face tracking • Collaborative Sessions • New 3D framework: RealityKit

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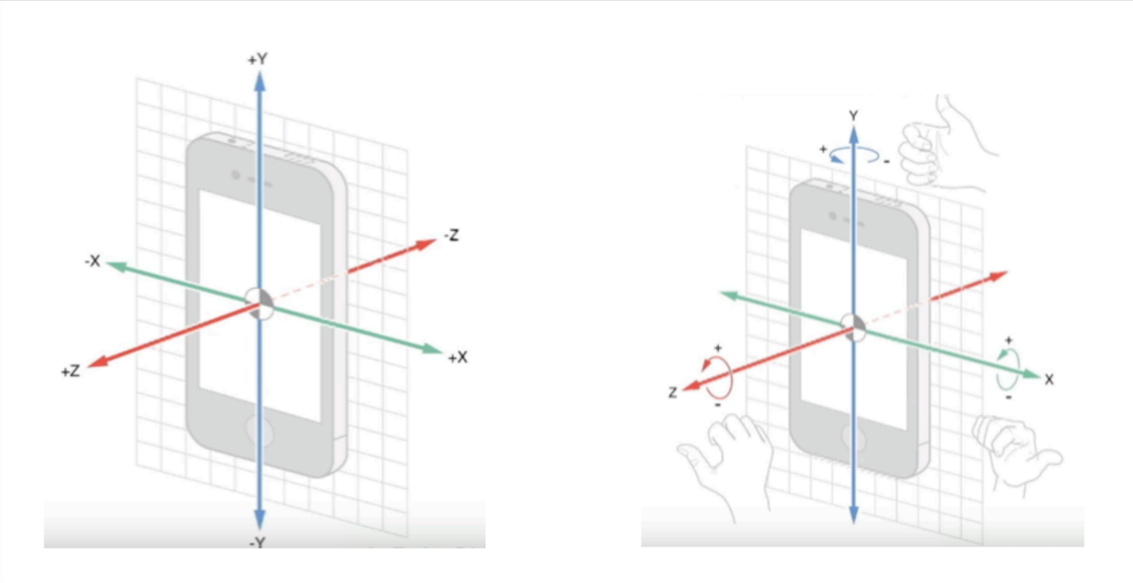
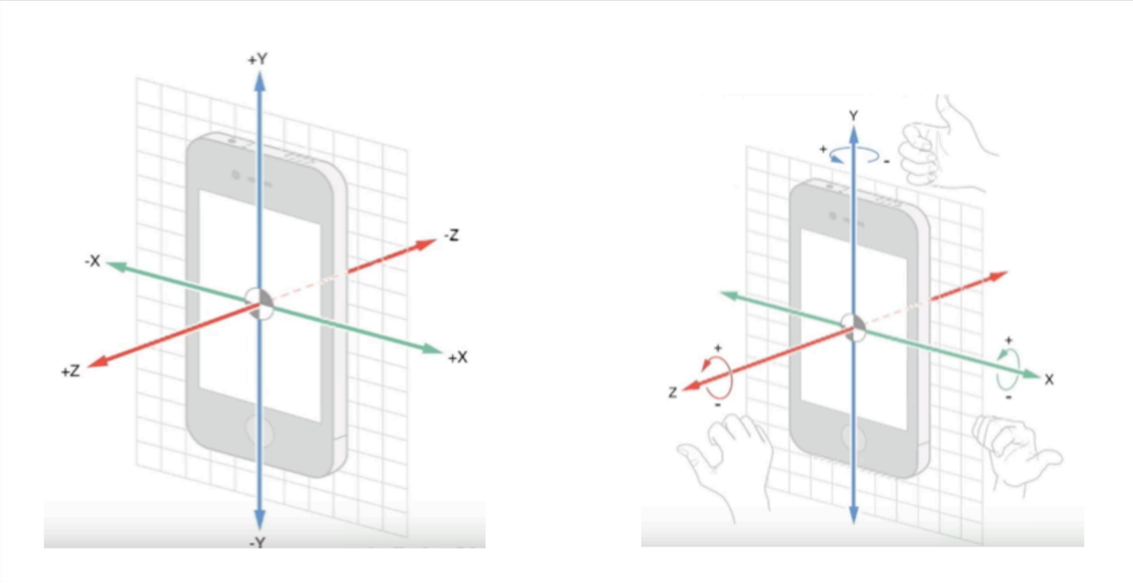


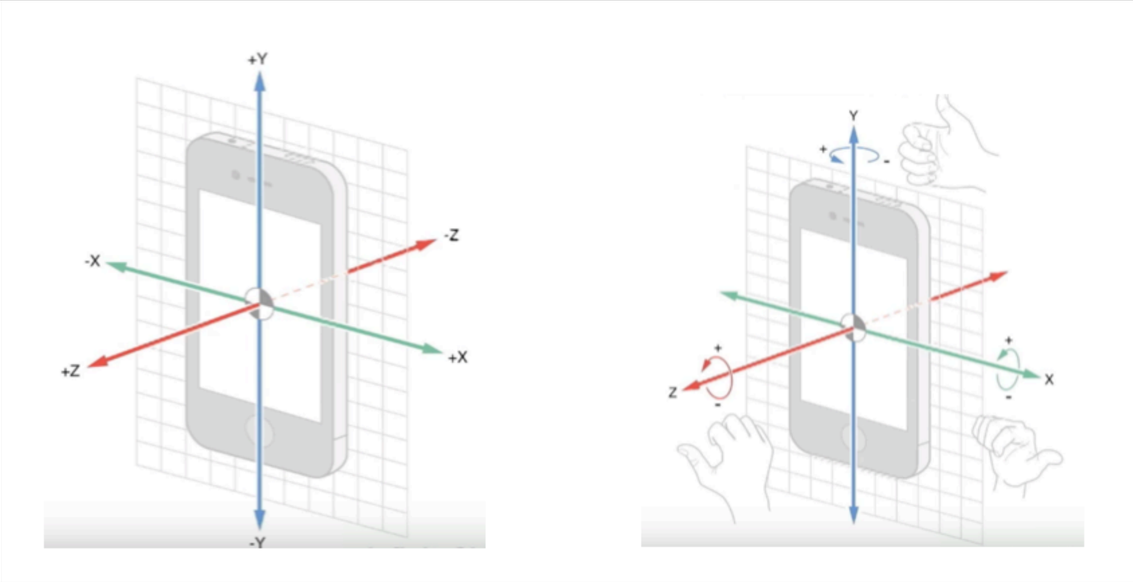
AUGMENTED REALITY - HOW IT WORKS

- World Tracking



AUGMENTED REALITY - HOW IT WORKS

- World Tracking
  - Visual-inertial odometry



AUGMENTED REALITY - HOW IT WORKS

- World Tracking
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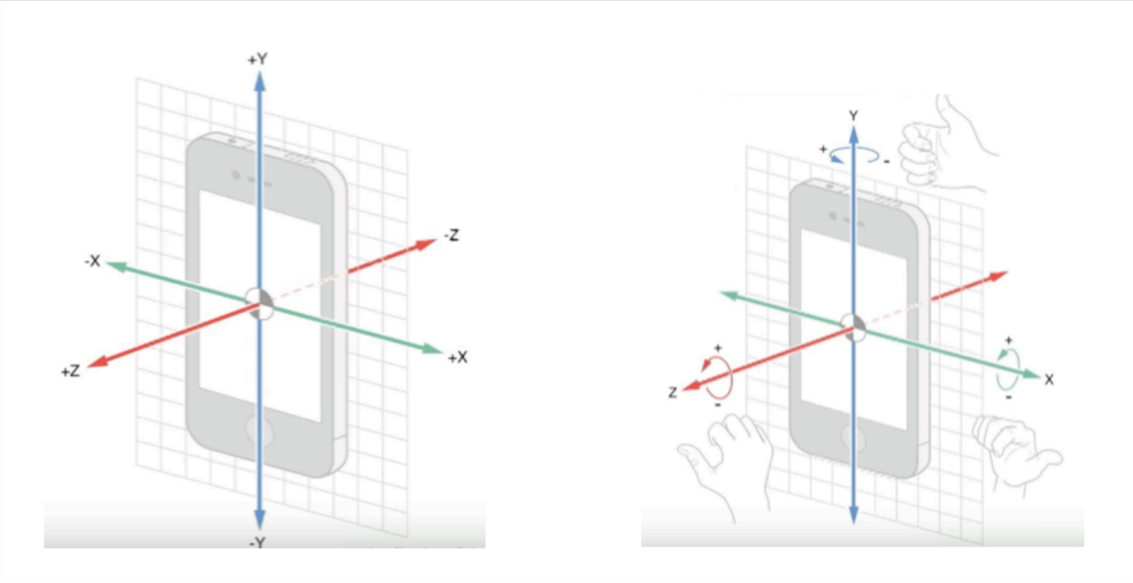
  - Computer vision + motion sensors



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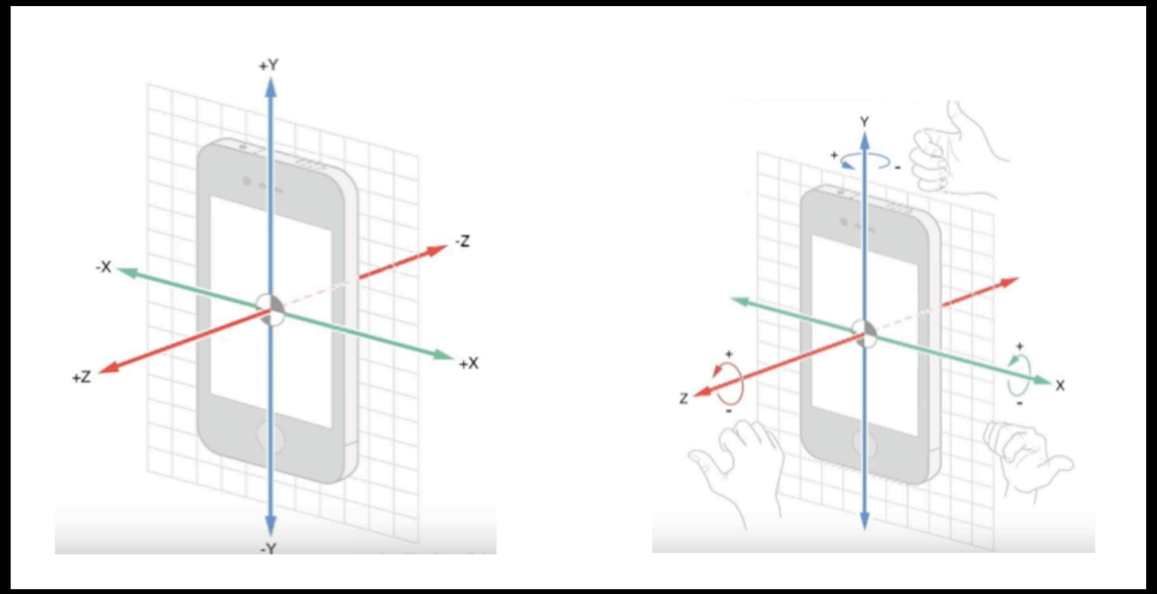

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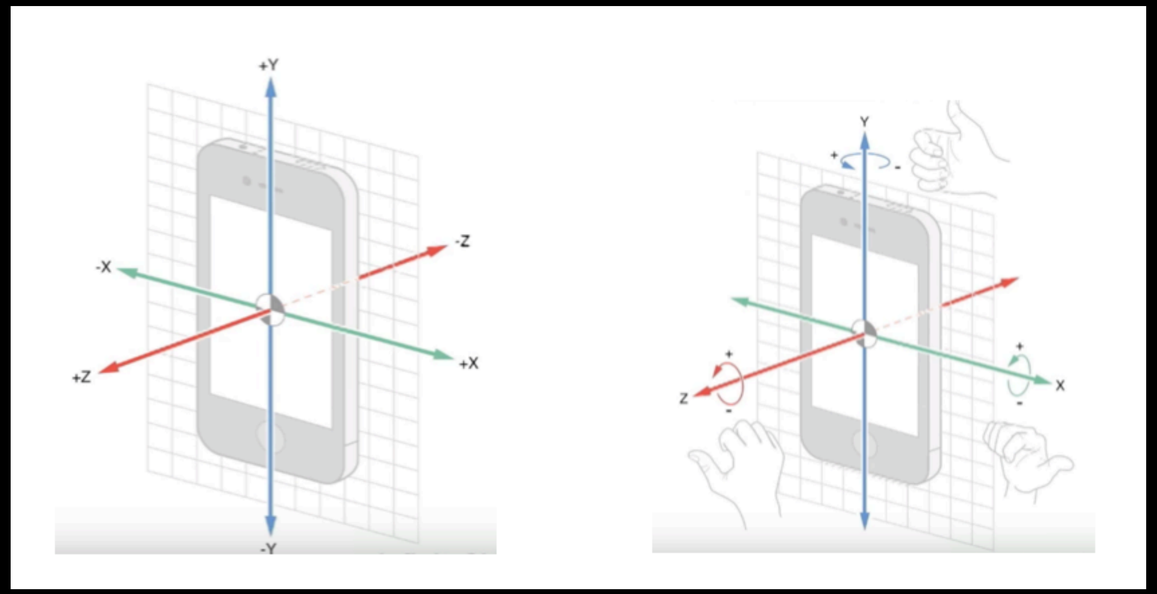

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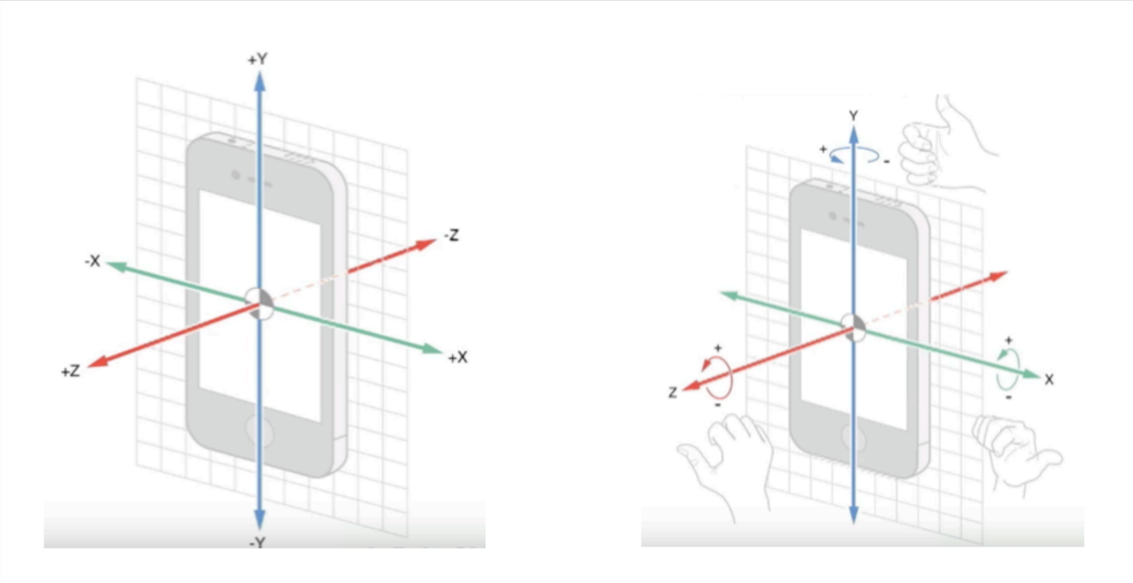

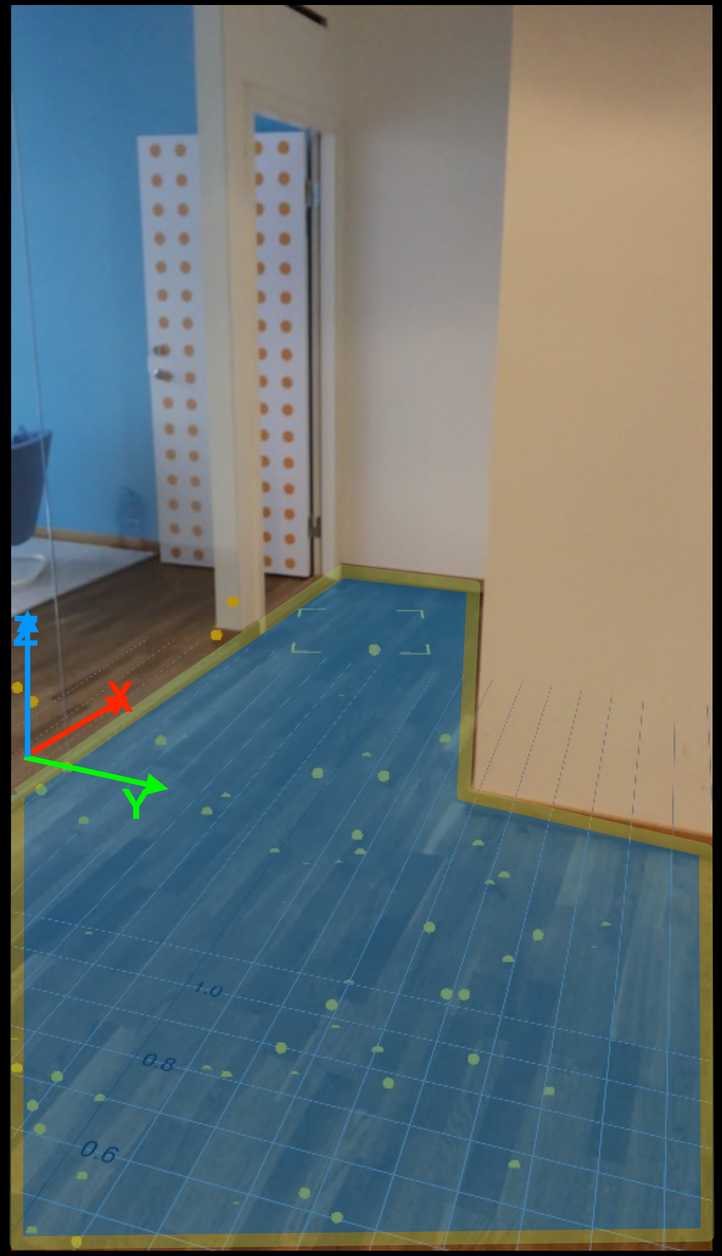

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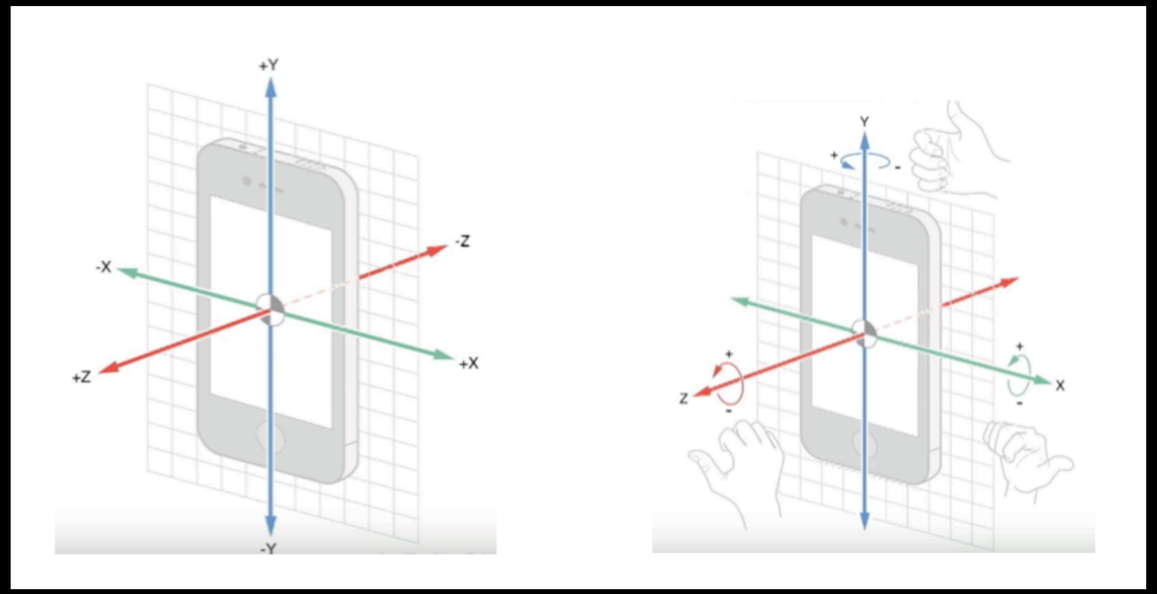

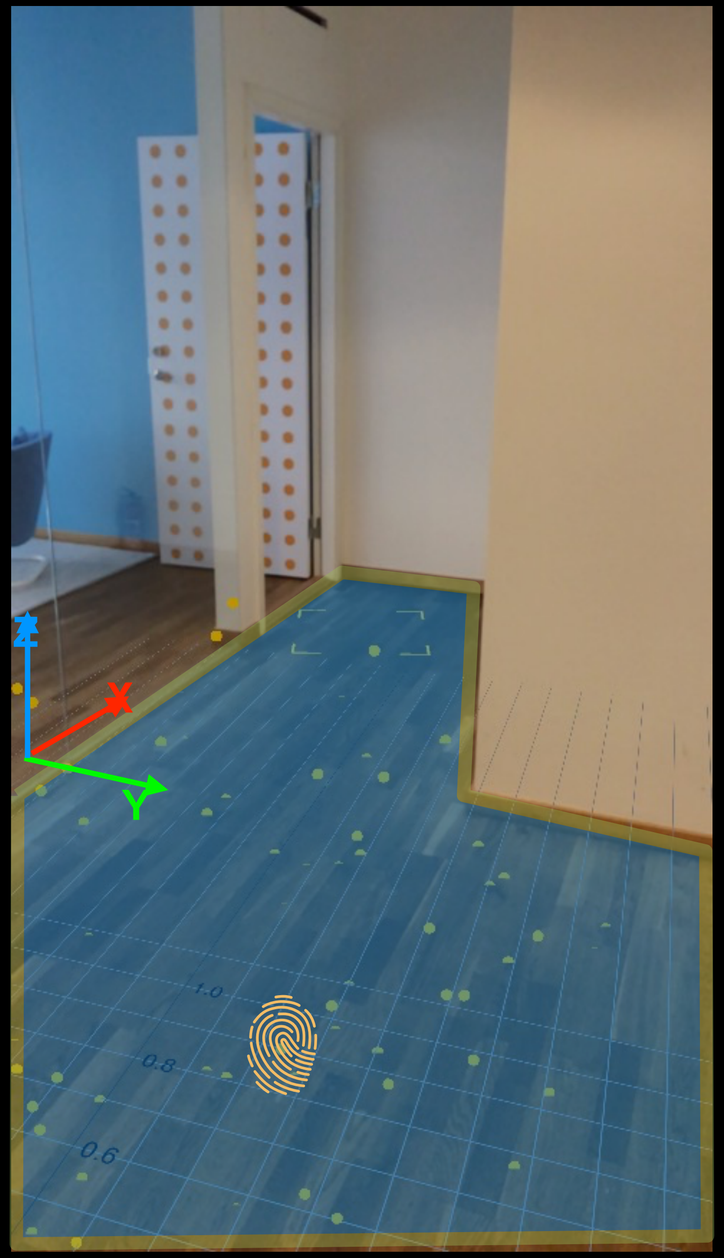

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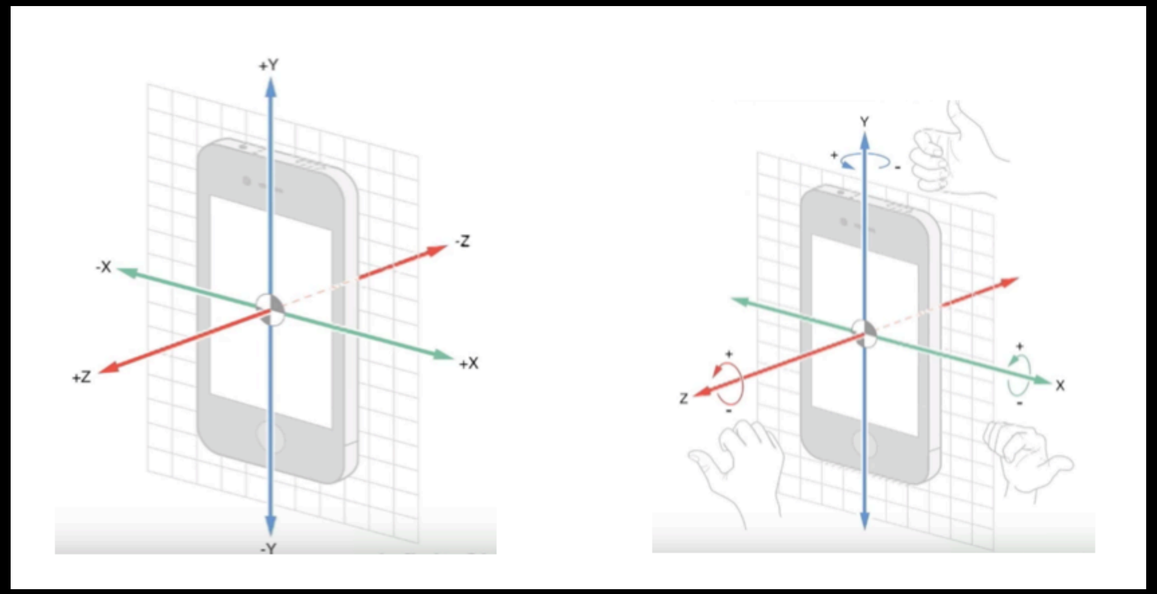

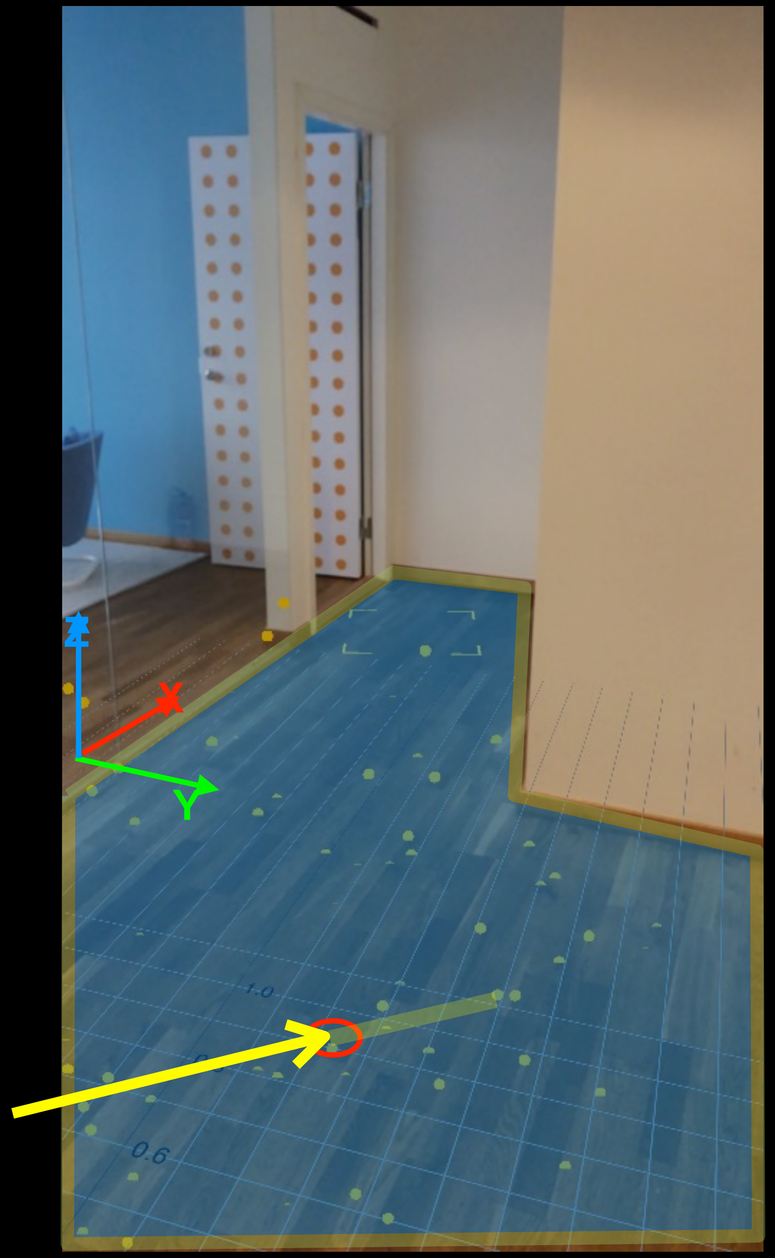

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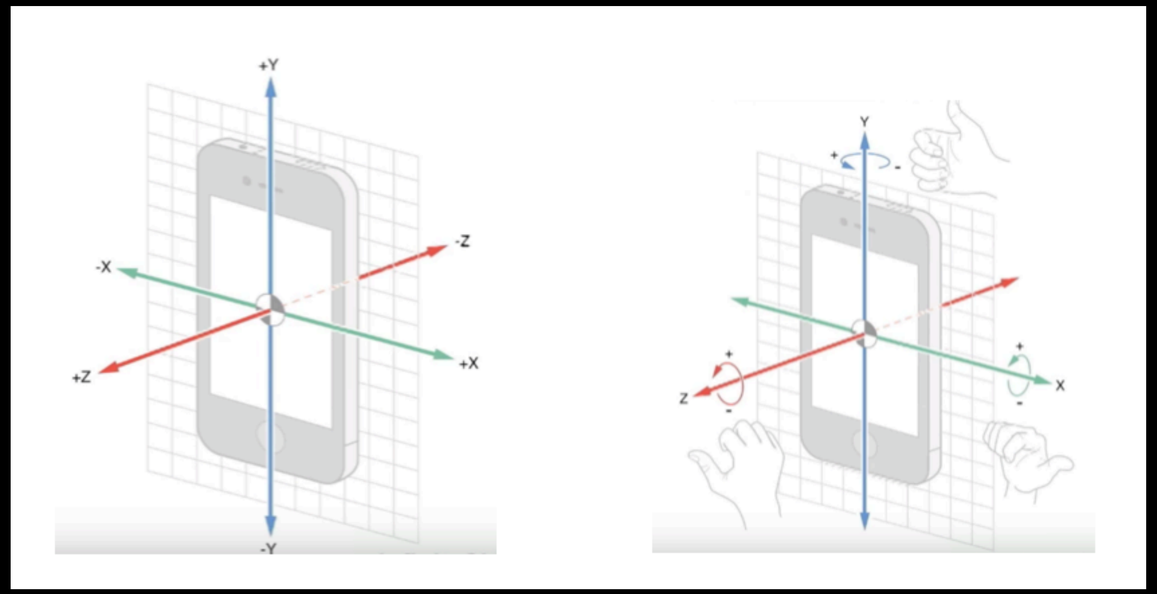

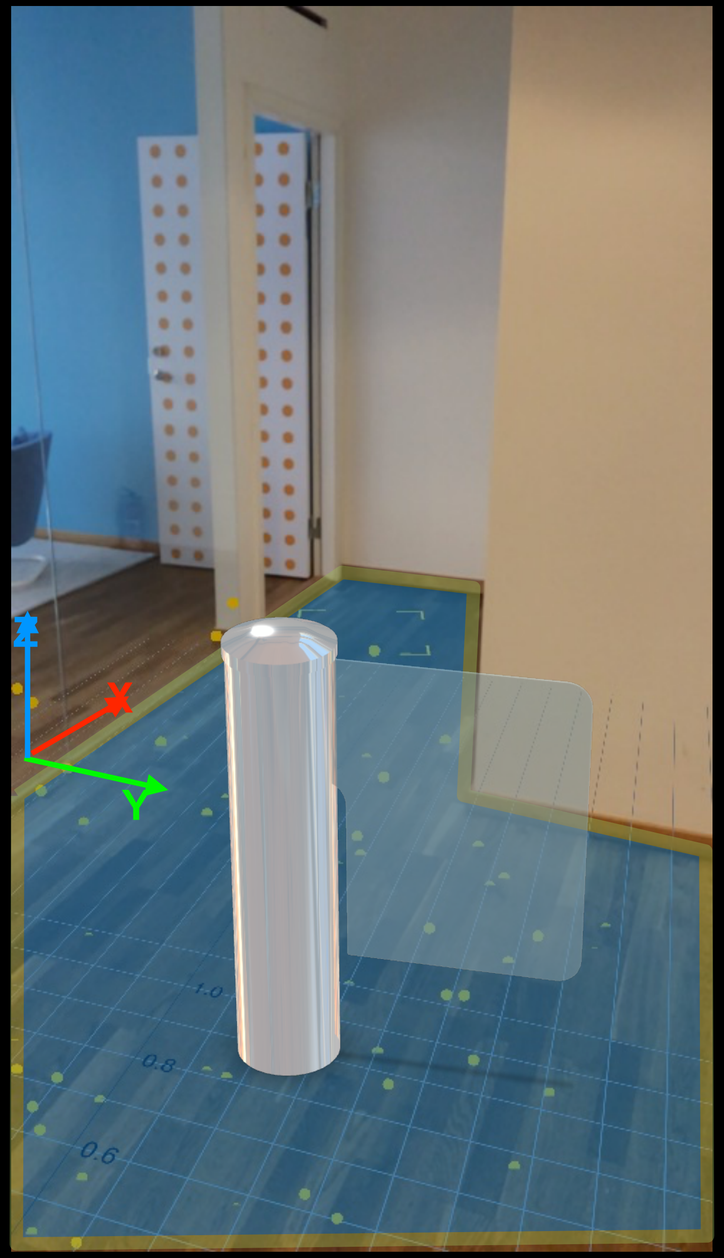

WHAT GOES IN TO MAKING AN AR APP?

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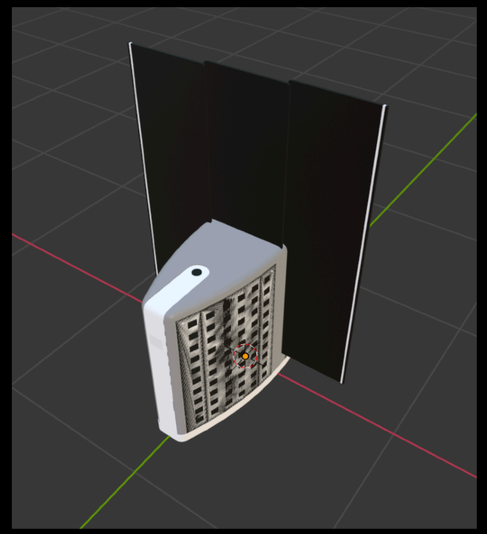
IT'S ALL ABOUT MODELS
(ALMOST)

WHAT GOES IN TO MAKING AN AR APP?

FINDING SUITABLE MODELS



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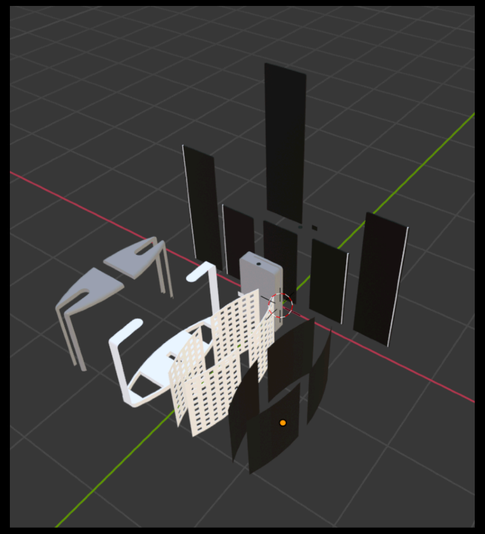
BREAKING INTO PARTS



CALLISTA

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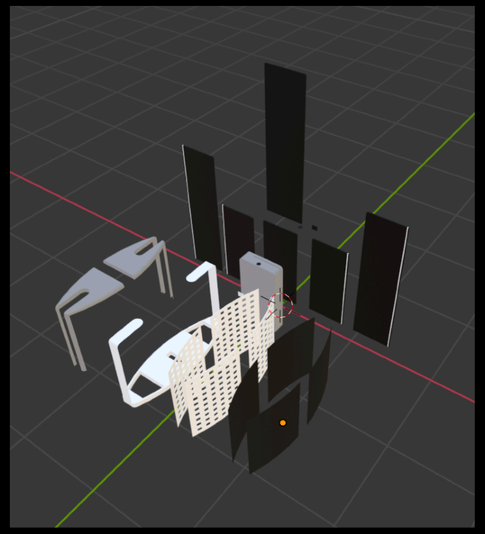
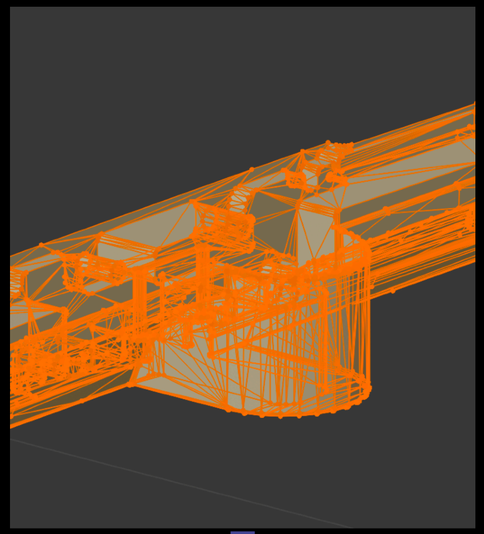
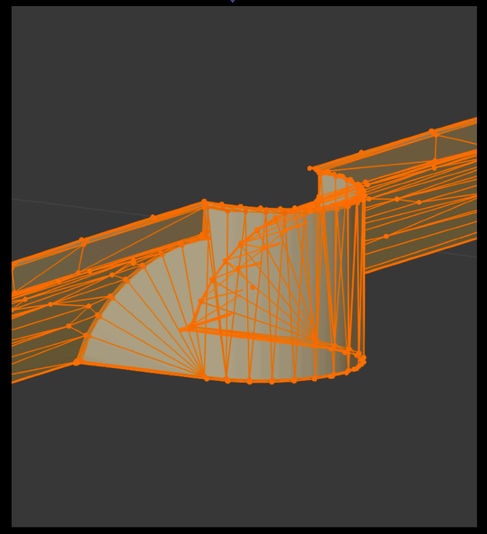


TIDY UP & SIMPLFY





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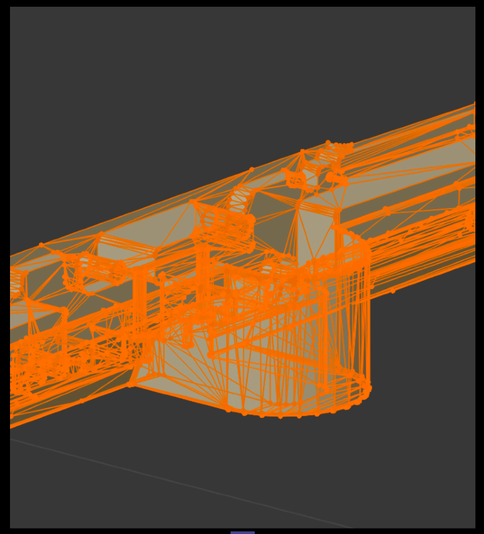
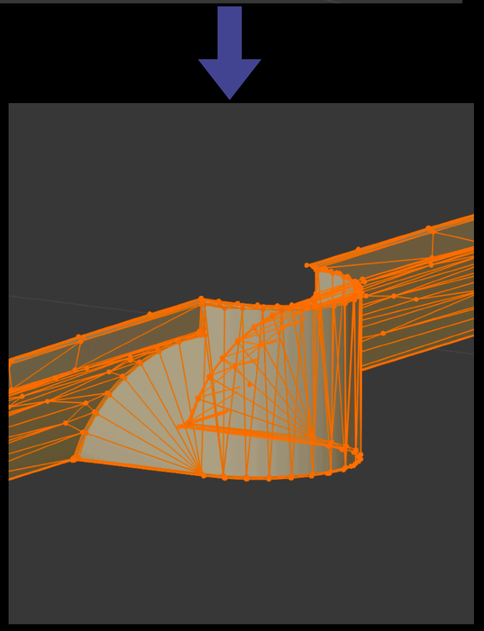
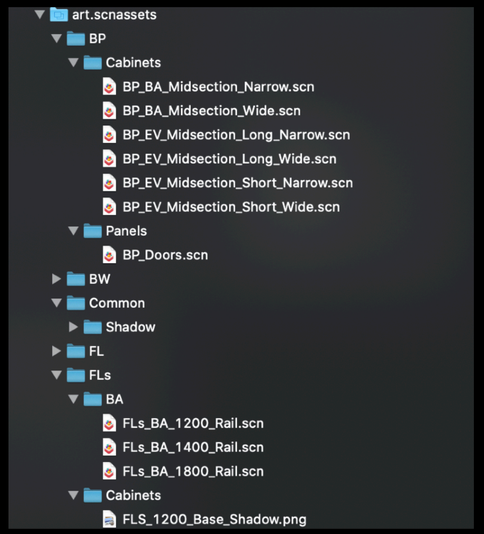
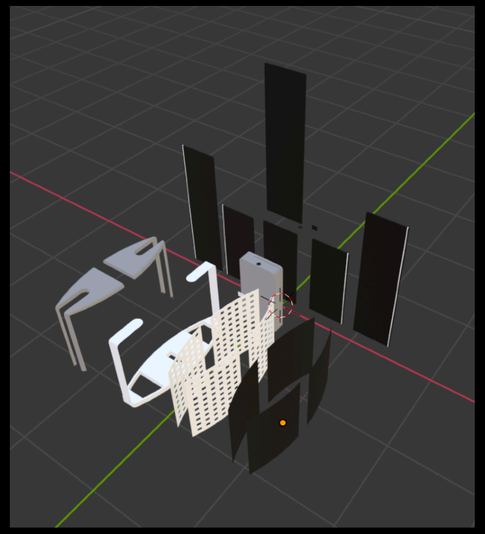




CONVERT & STRUCTURE



BREAKING INTO PARTS

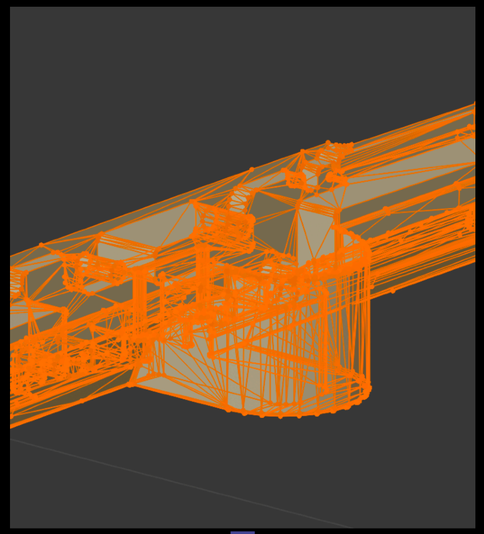


CALLISTA

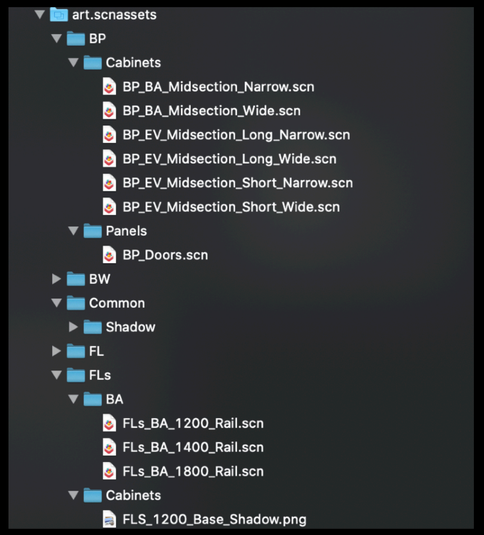
WHAT GOES IN TO MAKING AN AR APP?

FINDING SUITABLE MODELS

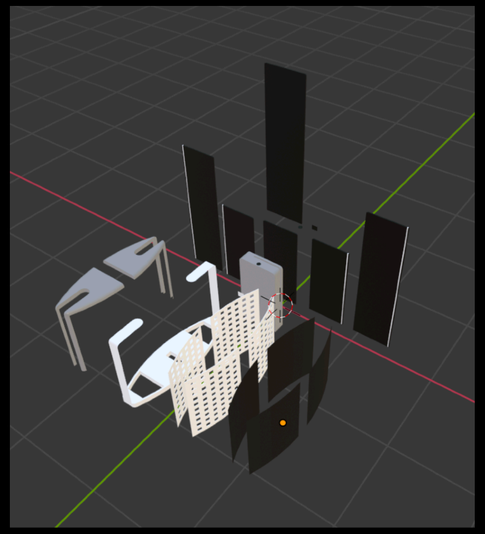
TIDY UP & SIMPLFY

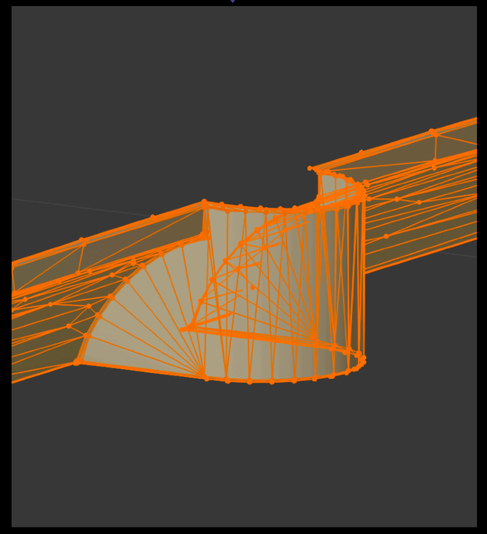


CONVERT & STRUCTURE

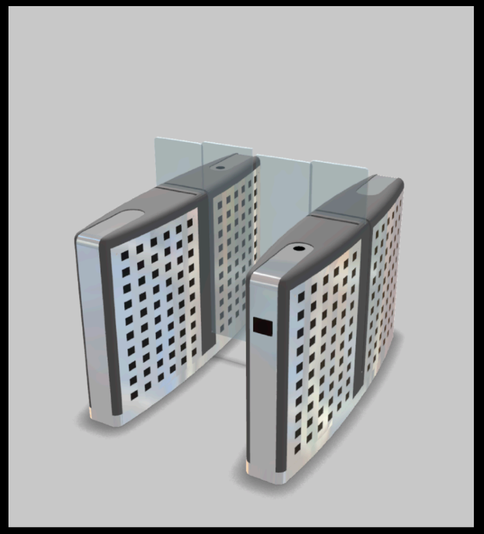


BREAKING INTO PARTS



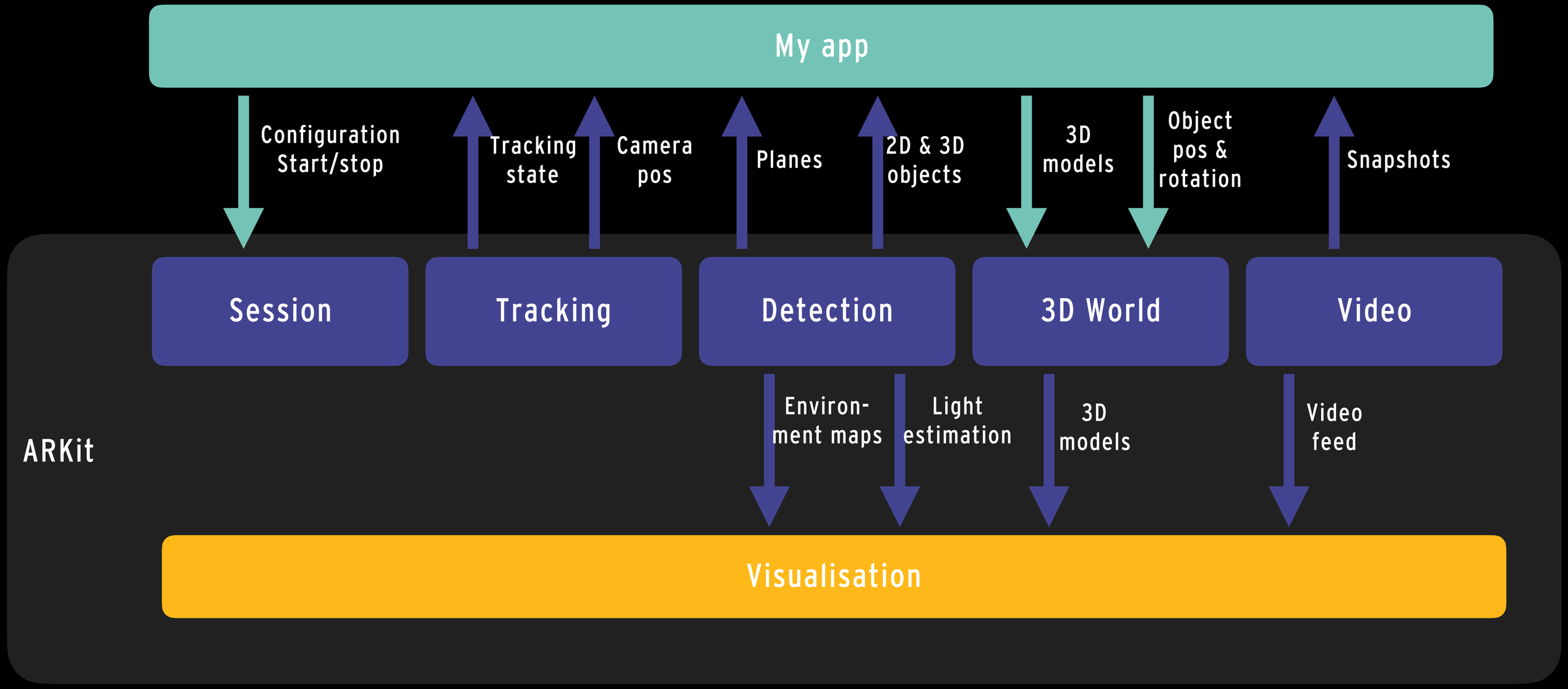


MATERIALS, LIGHTING & FINAL TOUCHES



CALLISTA

WHAT DOES ARKIT DO FOR YOU?



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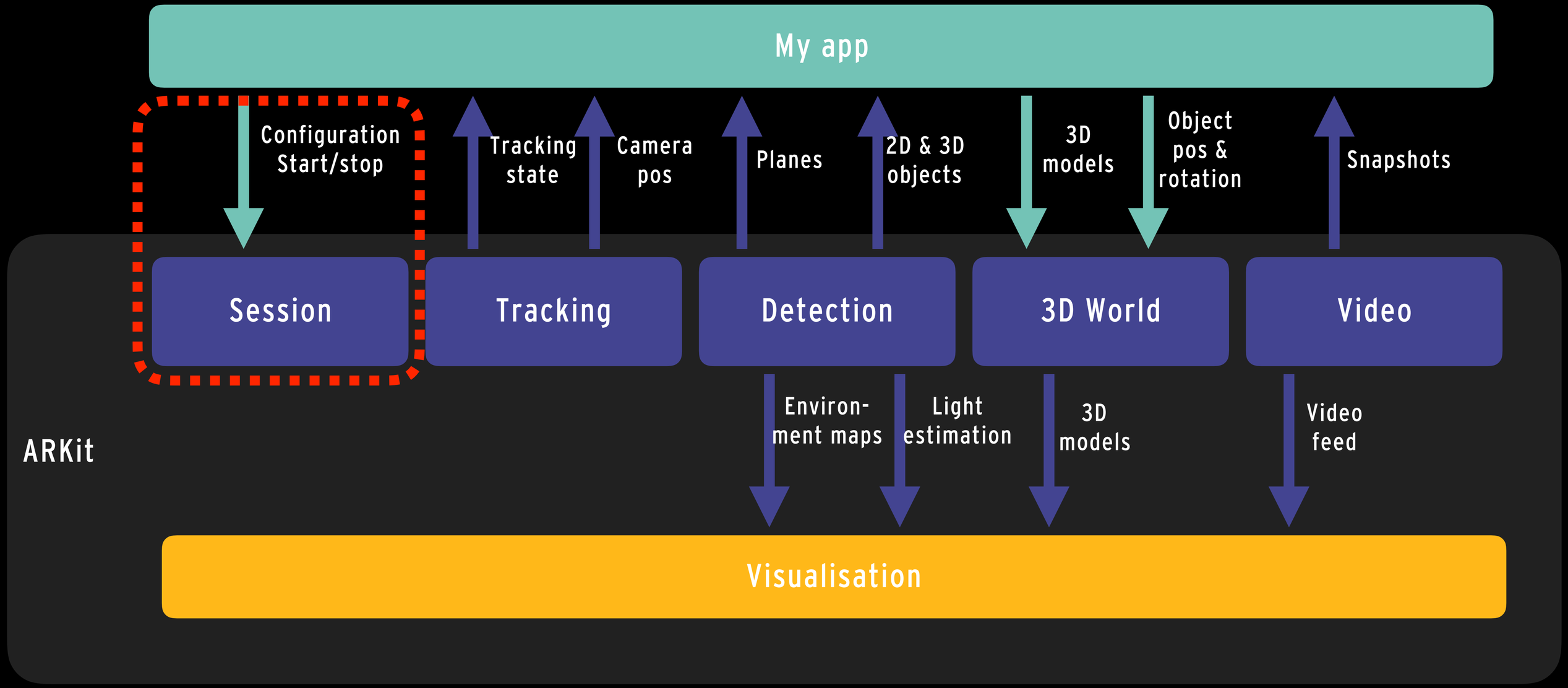

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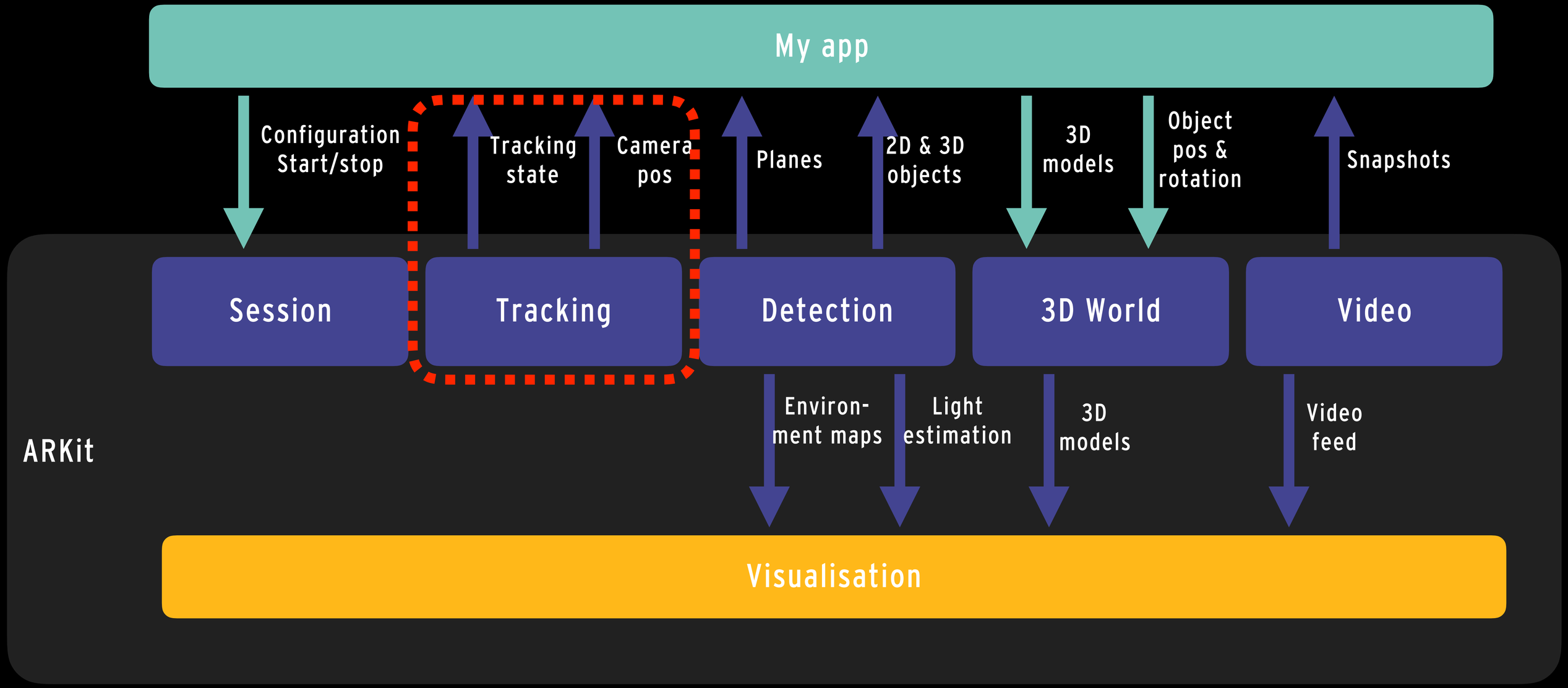

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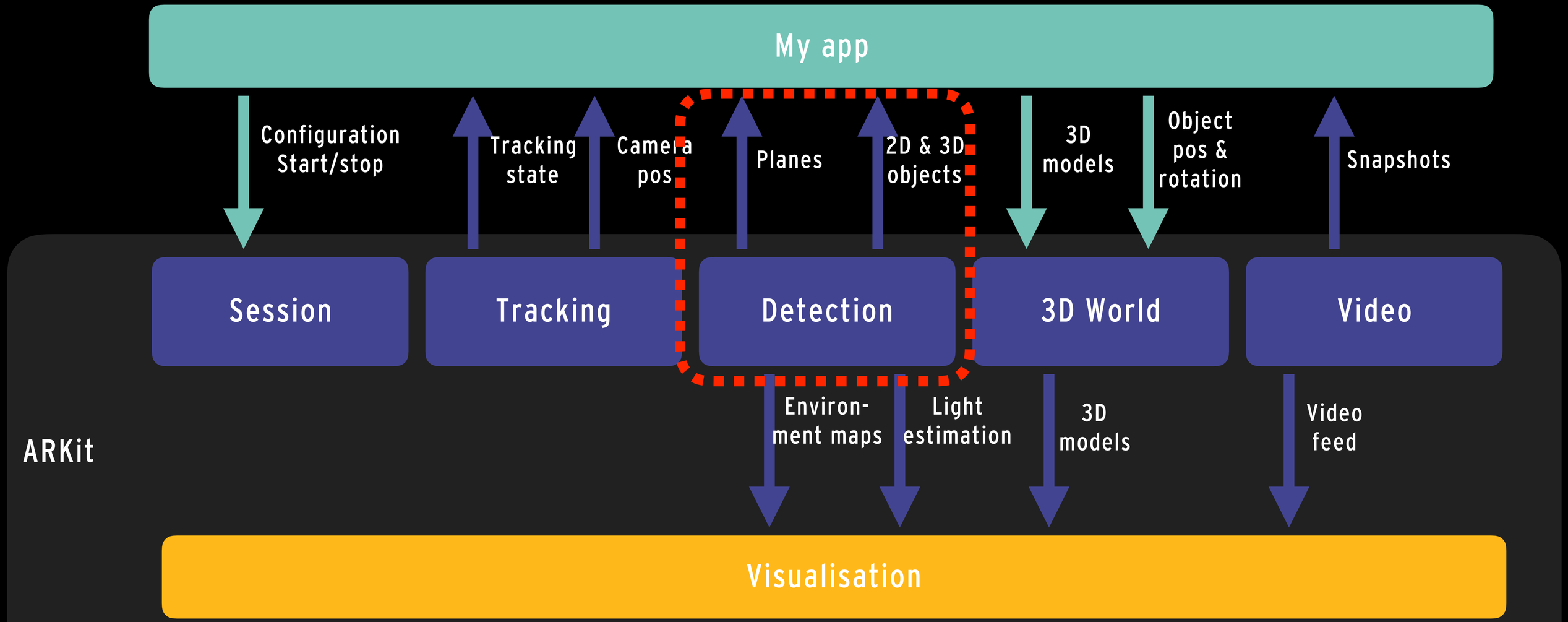

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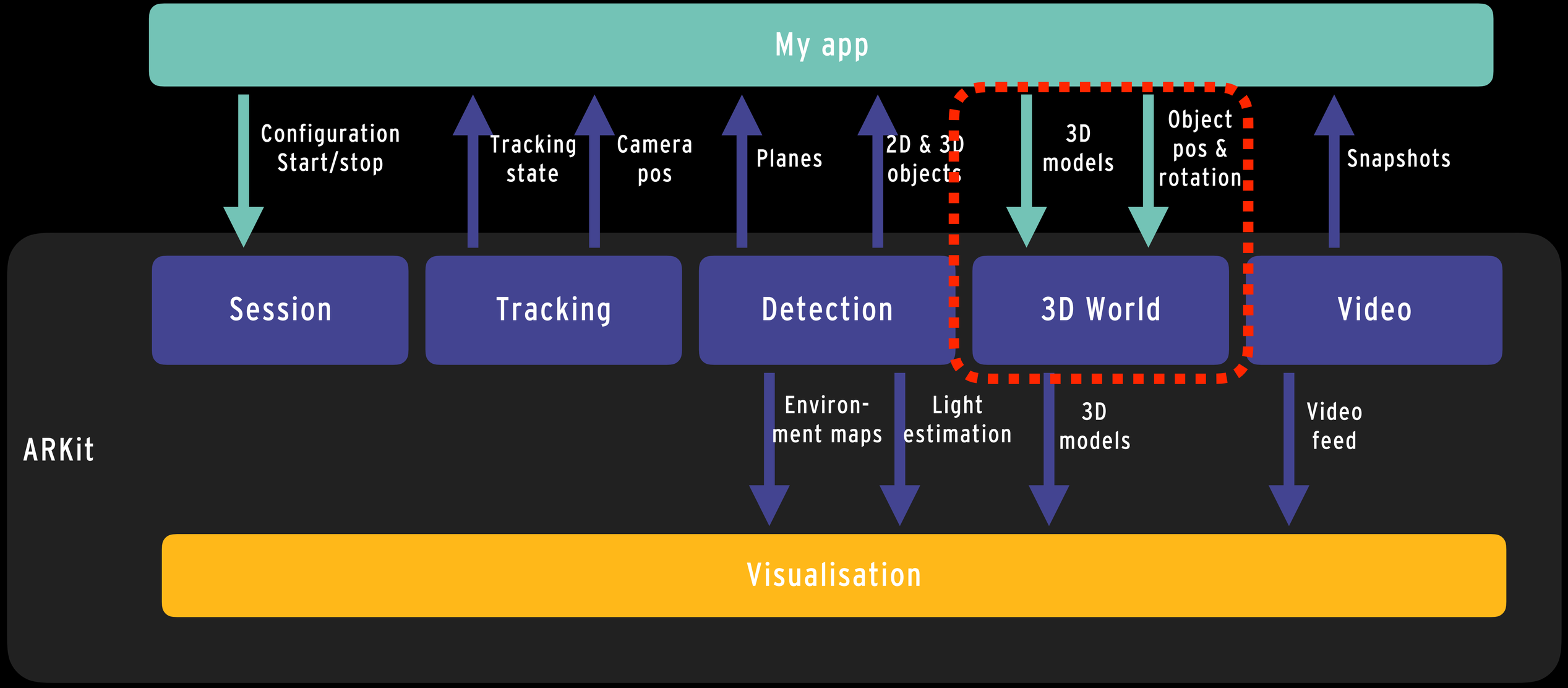

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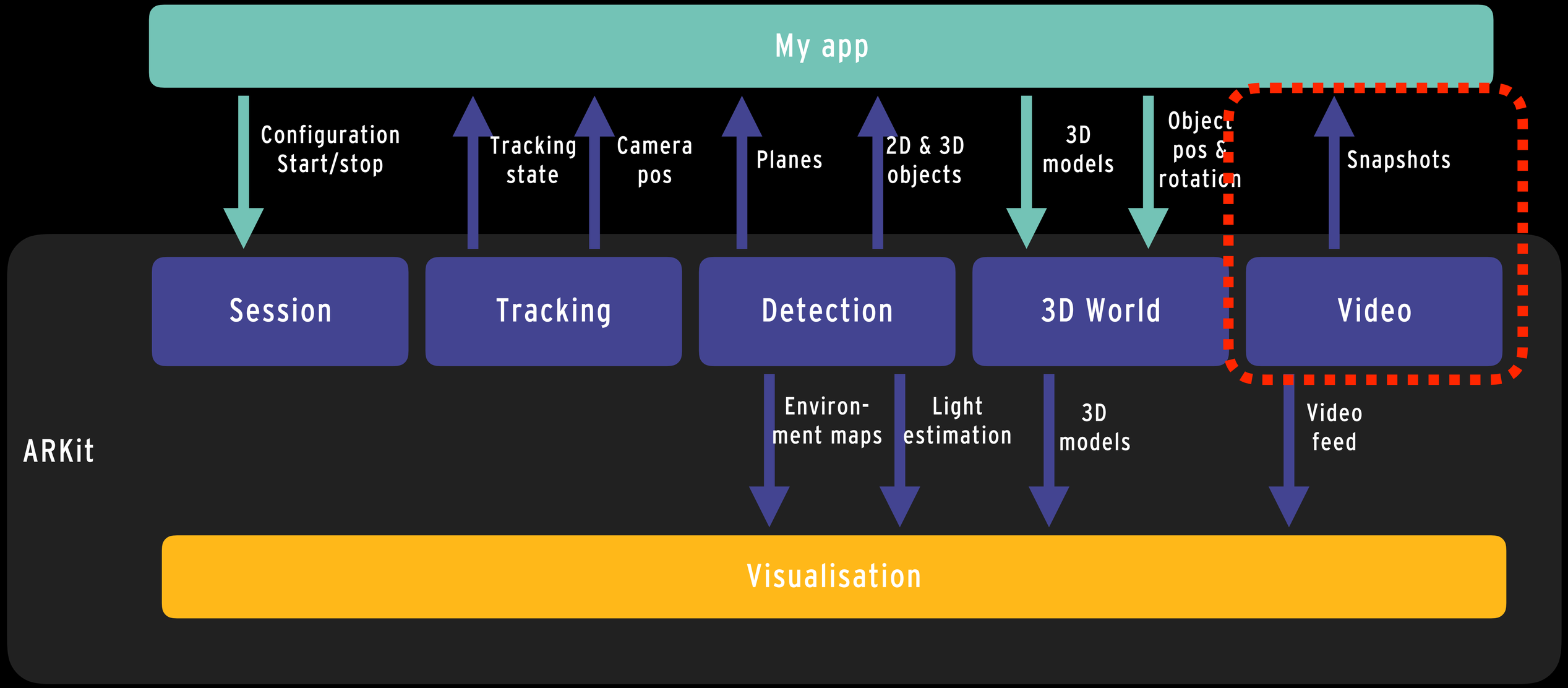

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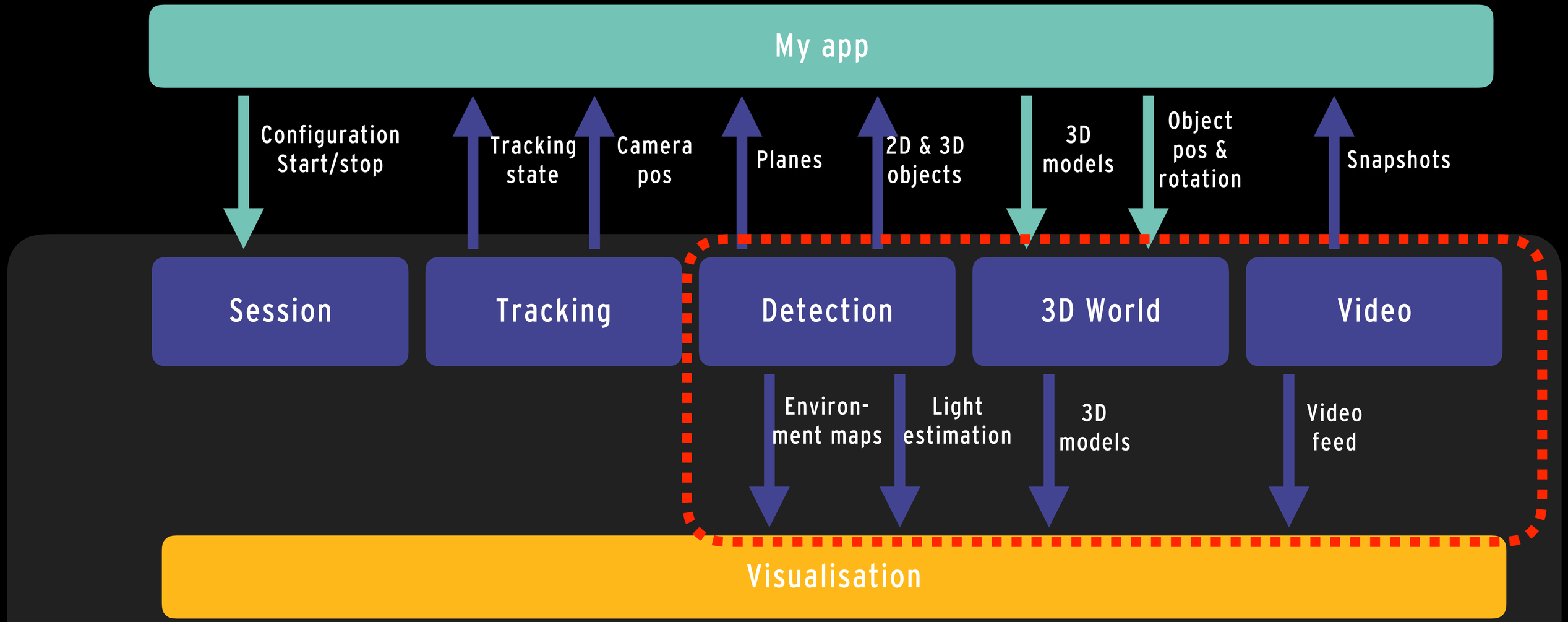
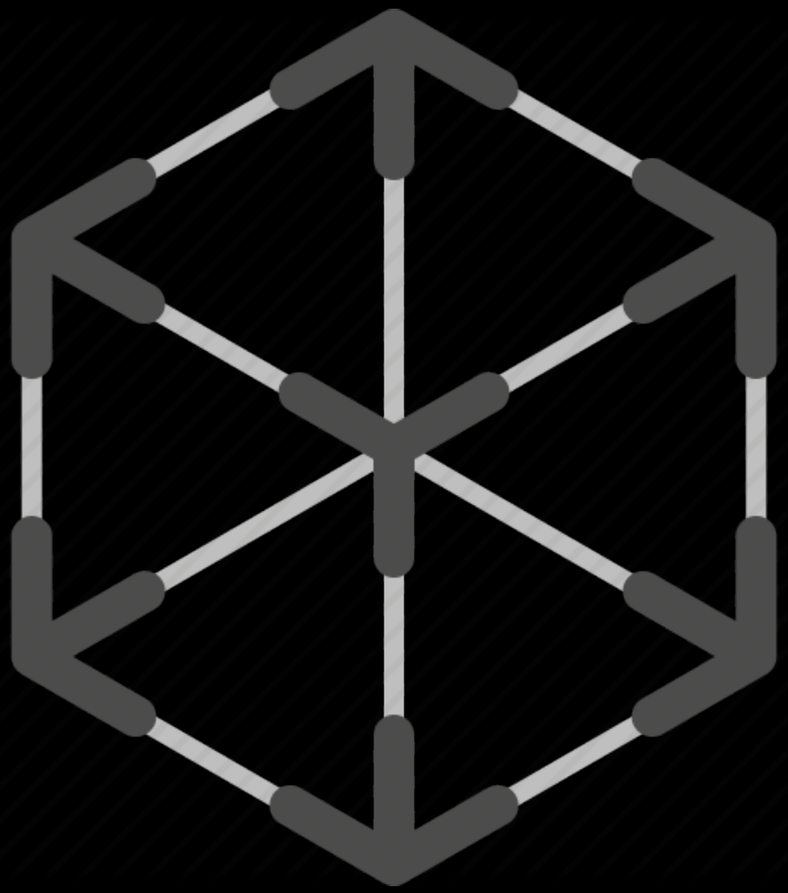


DEMO

DEMO



THE END