3D skeleton extraction for the *Humanitude* project

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Overview

- Introduction
- Background
- Implementation
- Future Work

Introduction

Theme : 3D skeleton extraction for the *Humanitude* project

- Easy to use

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- Easy to use
- ROS compatible

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- Easy to use
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- Markerless

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- Multi person

Introduction

Theme : 3D skeleton extraction for the *Humanitude* project

- Easy to use
- ROS compatible
- Markerless
- Multi person
- Occlusion resistant

About Humanitude

Background

Humanitude – Human Attitude

A way of treating patients developed in France.

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Focuses on the patient being upright, eye contact with the patient, verbal communication and touch.

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A way of treating patients developed in France.
Focuses on the patient being upright, eye contact with the patient, verbal communication and touch.
Using data gathered from a skilled practitioner of *Humanitude* we hope to provide useful feedback to a student of the method.

3D Keypoints

Background

We need the pose of both the caregiver and the patient.

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Why 3D?

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Why 3D?

- Interpersonal distance

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Why 3D?

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- Pose
- Setup agnostic

Detecting Humans

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One of the most popular methods :

Detecting Humans

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- Well tested

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- Limbs (Part Affinity fields)

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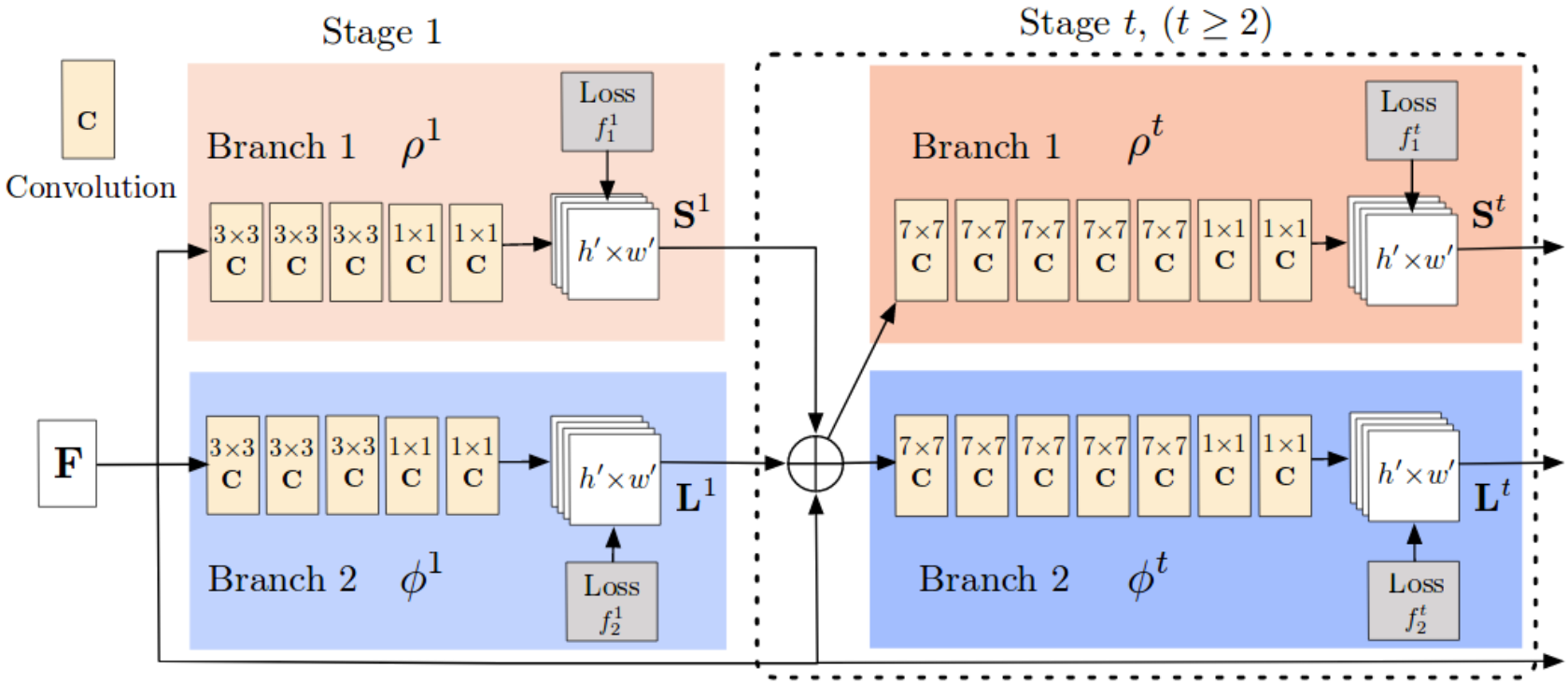
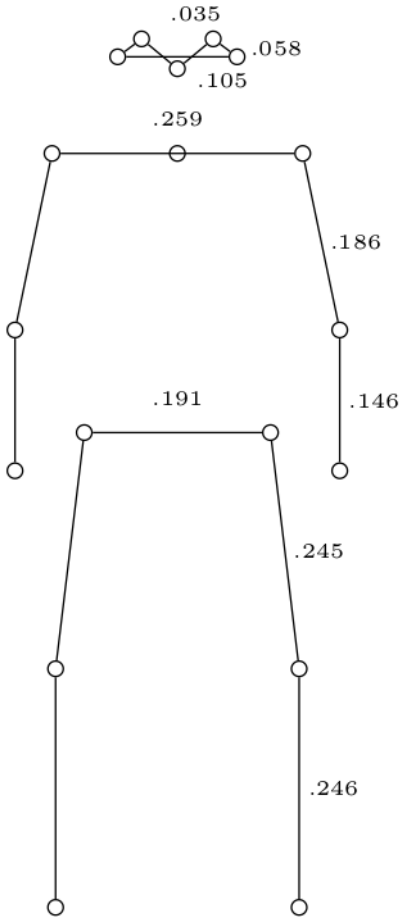
- Joint locations (Confidence maps)
- Limbs (Part Affinity fields)
- Multiple people

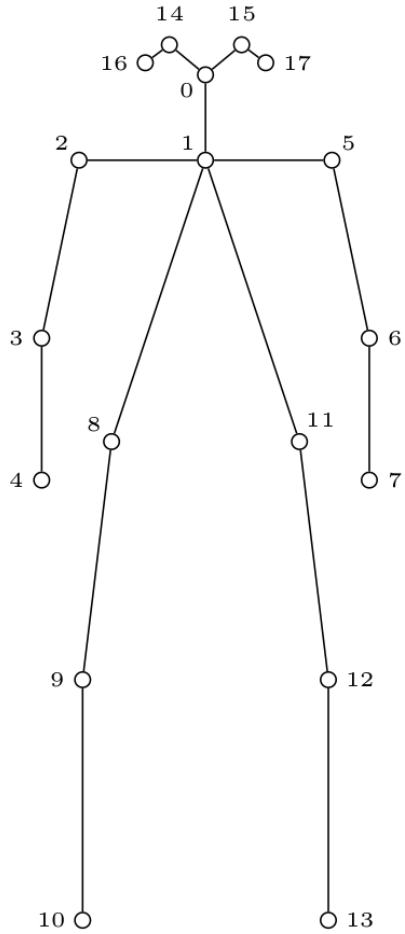
OpenPose Architecture

Background



Implementation





Implementation

ROS Nodes

- Kinect subscriber

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- Info Extractor

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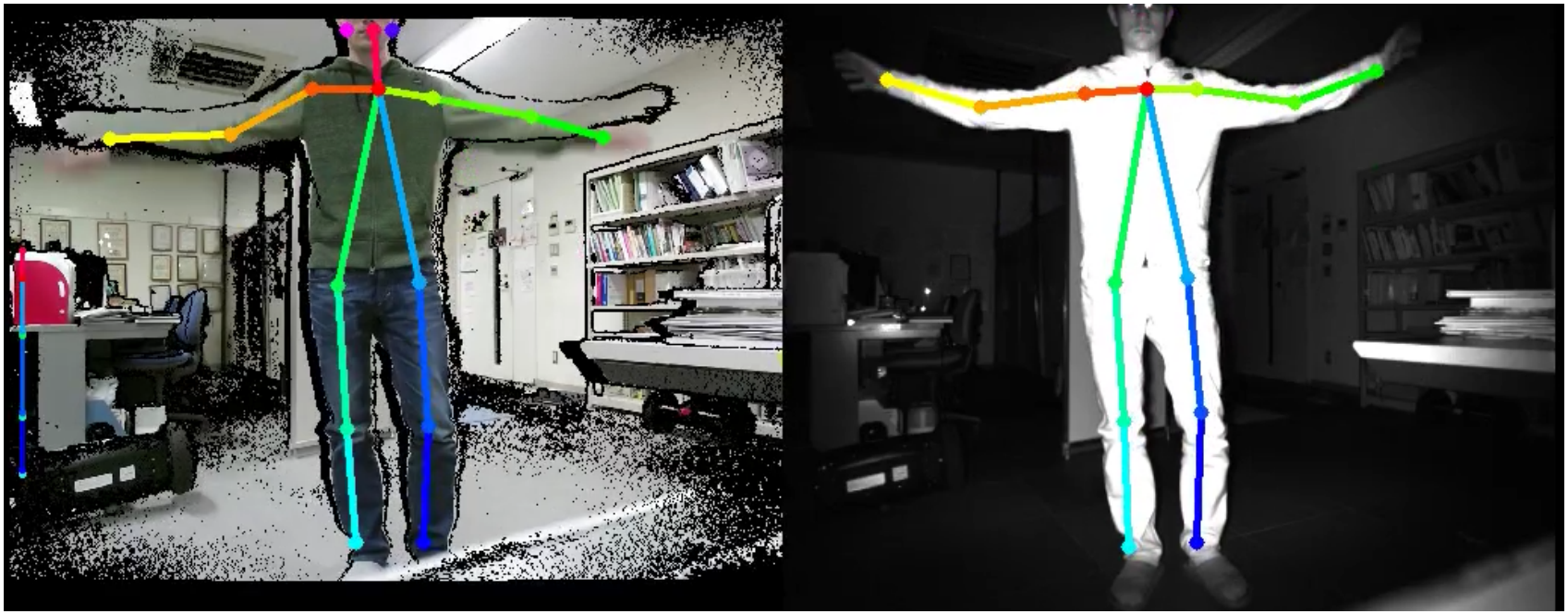


person_3_tag
person_1_tag
person_2_tag
person_5_tag
person_4_tag