Joint Track Machine Learning

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Outline
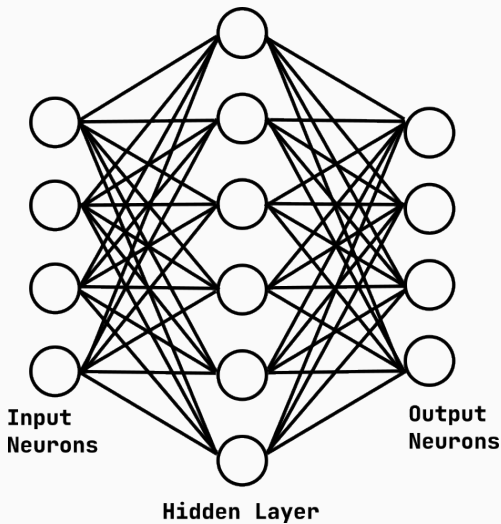
Introduction

Two columns

- this slide consists of two columns
- the first (left) column has no heading and consists of text
- the second (right) column has an image and is enclosed in an @example@ block

Input Neurons

Output Neurons

Hidden Layer

Another frame here

Typing some things here that relate to the research.

$$T = F(s, \theta)$$

Motivation

The Problem

- Joints manifest pain during dynamic activity.
- 20% of patients receiving TKA are dissatisfied.
  - Instability, pain, unnatural[1, 2, 3].
- No reliable method of clinically assessing and quantifying joint dynamics.

Fig. 6. Qualitative COCO human pose estimation results over representative images with various human size, different poses, or clutter background.

References

References

[1] P. N. Baker et al. "The Role of Pain and Function in Determining Patient Satisfaction After Total Knee Replacement: Data From the National Joint Registry for England and Wales". In: *The Journal of Bone and Joint Surgery. British volume* 89-B.7 (July 2007), pp. 893–900. ISSN: 0301-620X, 2044-5377. DOI: 10.1302/0301-620X.89B7.19091.

[2] Robert B. Bourne et al. "Patient Satisfaction after Total Knee Arthroplasty: Who Is Satisfied and Who Is Not?" In: *Clinical Orthopaedics & Related Research* 468.1 (Jan. 2010), pp. 57–63. ISSN: 0009-921X. DOI: 10.1007/s11999-009-1119-9.

[3] C. E. H. Scott et al. "Predicting Dissatisfaction Following Total Knee Replacement: A Prospective Study of 1217 Patients". In: *The Journal of Bone and Joint Surgery. British volume* 92-B.9 (Sept. 2010), pp. 1253–1258. ISSN: 0301-620X, 2044-5377. DOI: 10.1302/0301-620X.92B9.24394.