Voting Across Columns

Chapter Revision History

The table notes major changes between revisions. Minor changes such as small clarifications or formatting changes are not noted.

Version	Date	Changes	Principal Author(s)
0.5	Nov 2019	Initial release	C. Maver

Voting Across Columns

In this chapter, we introduce a core principle of the Thousand Brains Theory of Intelligence: voting across columns. This concept was published in a peer-reviewed paper, "A Theory of How Columns in the Neocortex Enable Learning the Structure of the World," in the journal *Frontiers in Neural Circuits*. The paper also has an accompanying video. You can find these resources, along with FAQs here.

Object Recognition: Learning through movement

We have proposed a network model that learns the structure of objects through movement. Our model is based on the known biology of cortical columns and layers, and helps explain their function. Object recognition in our model can be achieved in two ways:

- Over time, as individual columns integrate changing inputs to recognize complete objects
- Through voting across columns. Existing lateral connections allow multiple columns to integrate inputs over space, thereby inferring more quickly, based on shared partial knowledge among adjacent columns.