



Content Based Recommendations

Content-based recommendations

- **Example: if you like horror movies, model will recommend you more horror movies**

Content-based recommendations

- **Simplest of all approaches**

Content-based recommendations

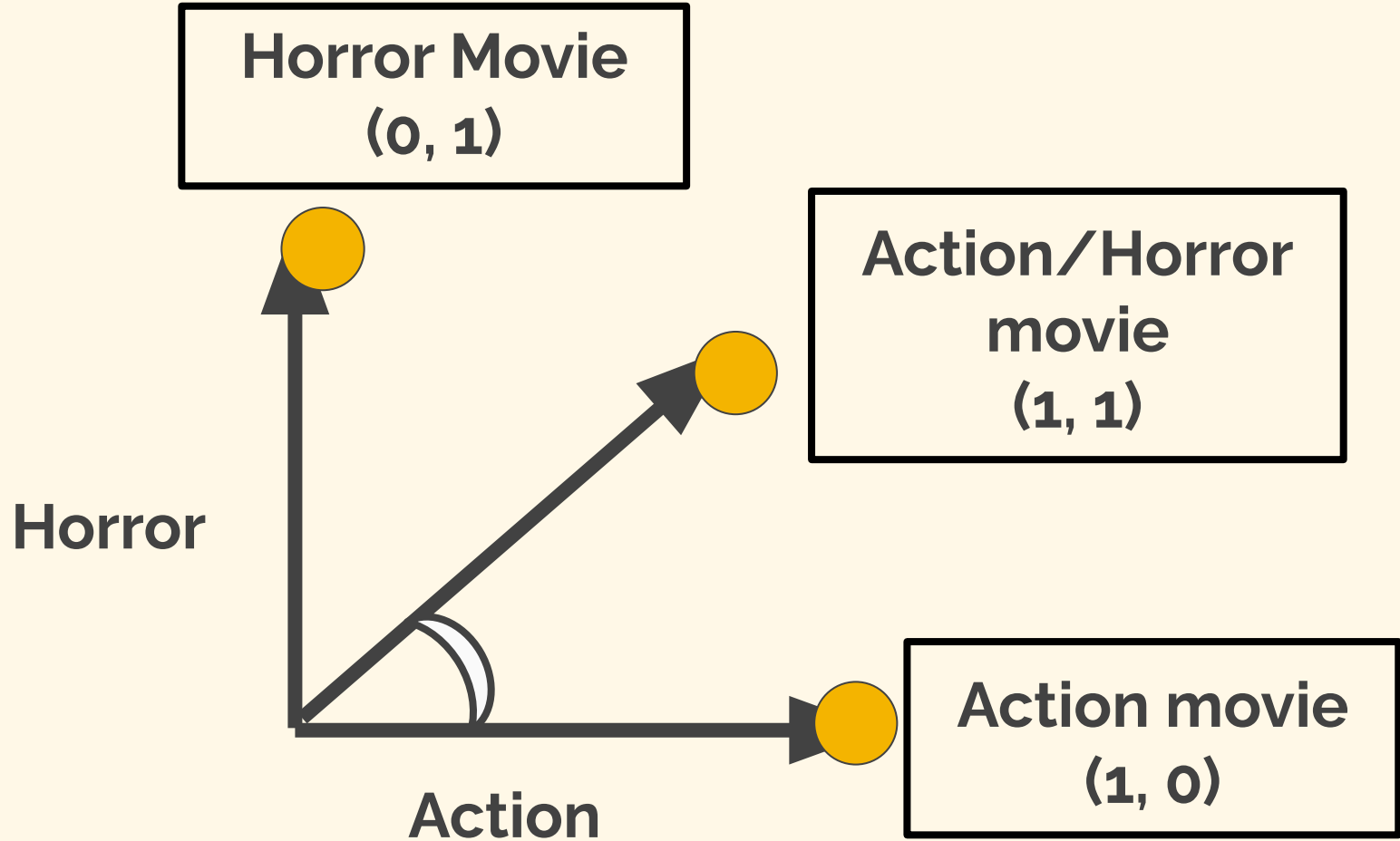
- **Recommend based on properties of items
instead of using aggregate user behavior**

How do you know if 2 movies are similar?

- Different metrics

Cosine Similarity Metric

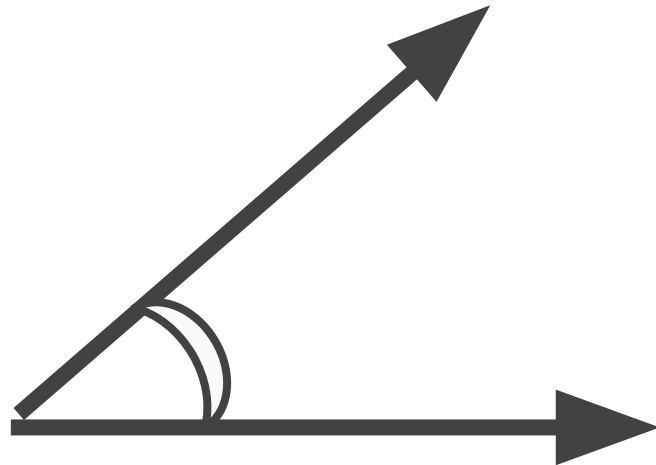
- Perfect for content-based recommendations
- Finds similarity of a pair of items



Example

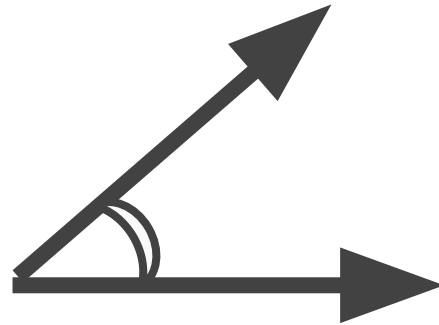
- represent a movie-genre matrix on a graph
- put value '1' for attribute if movie has attribute
- items closer on matrix are more similar

Cosine Similarity



- $\cos (\text{movie_1_angle} - \text{movie_2_angle})$

Cosine Similarity



- Finding angles from datasets requires more complex formula
- $A \cdot B / (\|A\| \cdot \|B\|)$

What if we want more features?

- Matrix dimensions increase



Content Based Recommendations ✓