

# VisPaD: Tool for Visualization and Pattern Discovery for Fighting Human Trafficking



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## Background (Why?)

- × Human Trafficking (HT) affects over 4.8 million people world-wide
- × Majority of victims are advertised online
- × One trafficker writes ads for multiple victims
- × HT detection algorithms look for clusters of similarly phrased ads

## Problem (What?)

Given the large number of clusters, how can we help expedite the process of identifying interesting ones?

**How can we visualize these clusters to draw useful insights from them?**

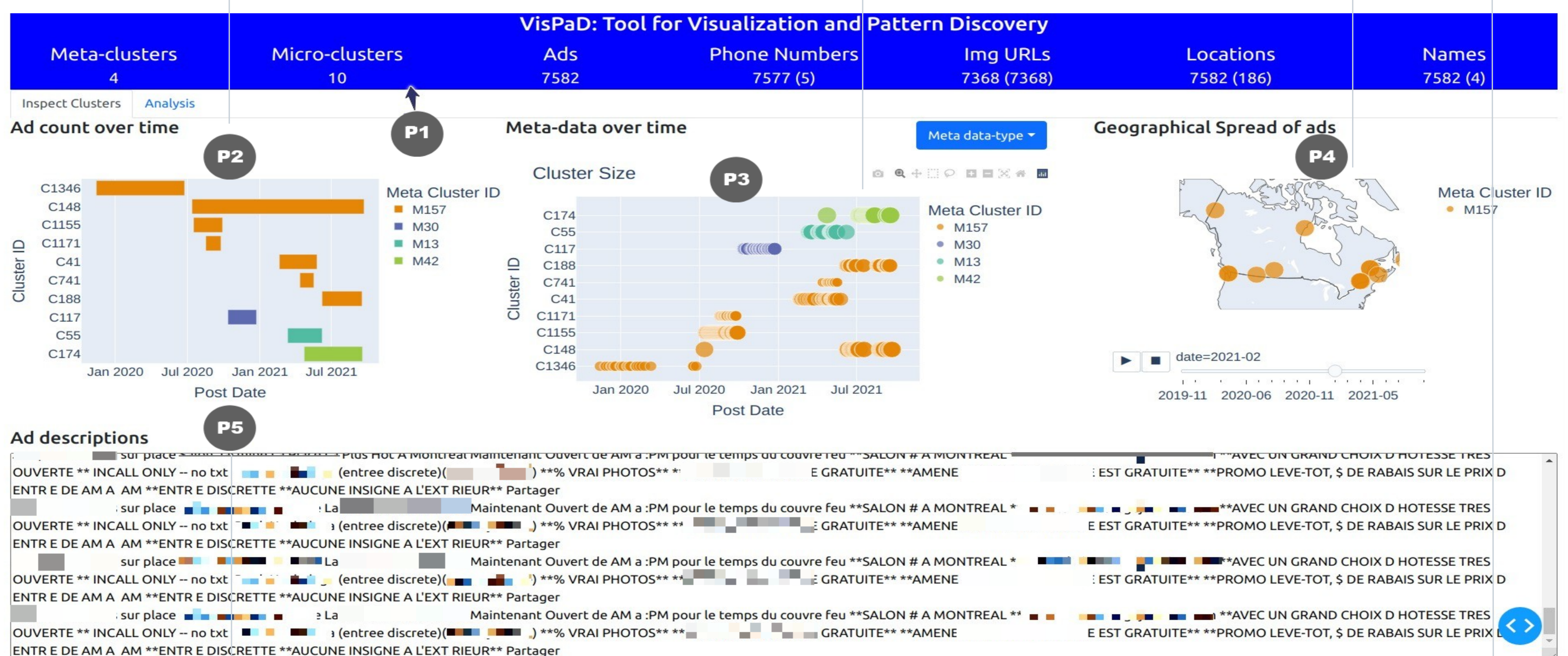
## Proposed tool (How?)

- ✓ Characterize the clusters and represent them as embeddings
- ✓ Interactively visualize the cluster embeddings
- ✓ Identify interesting patterns
- ✓ Select the interesting clusters and inspect their spatio-temporal information

**P2: View cluster activity over time. Which ones post for longer duration?**

**P3: Inspect meta-data behavior. Is there an increase in number of images?**

**P4: Identify spatio-temporal hotspots. Are the ads posted all over the country?**

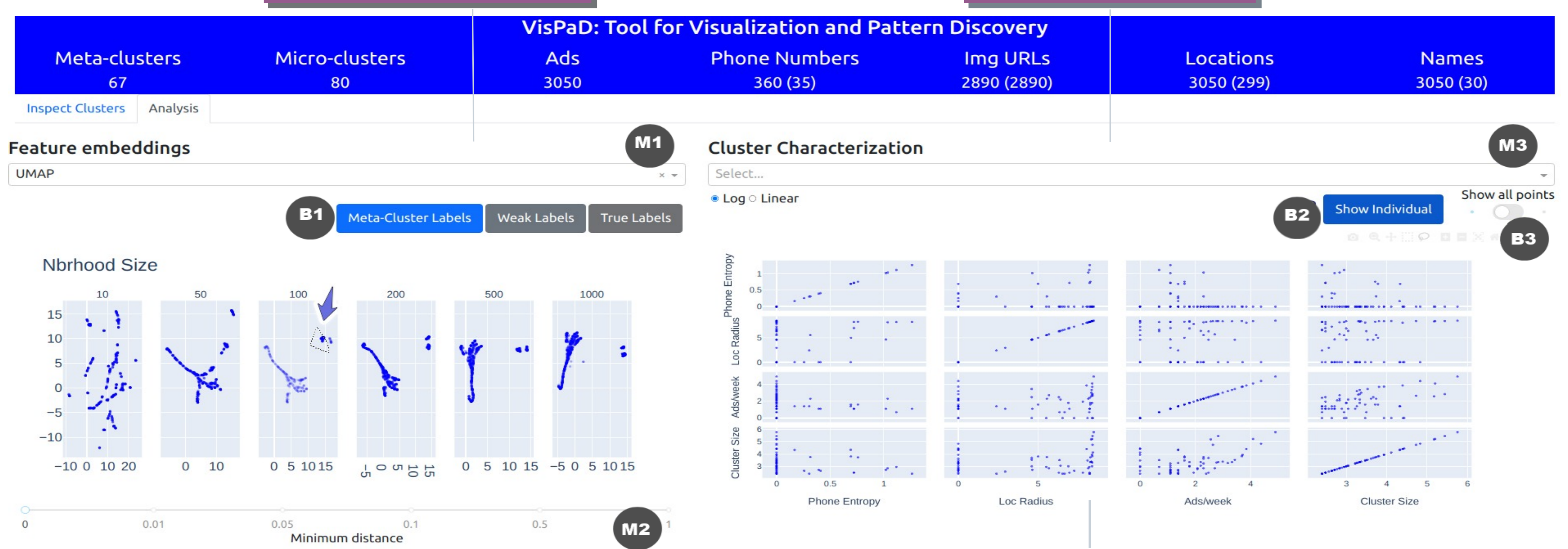


**P5: Look at patterns in the ad text. Are the ads posted all over the country?**

**P1: Summarized info of selected clusters and associated meta-data**

Choose method of visualizing cluster embeddings

Select particular features to inspect



Select interesting pattern of clusters for inspection

Which features separate the selected clusters?