Visual analytics @ TU/e

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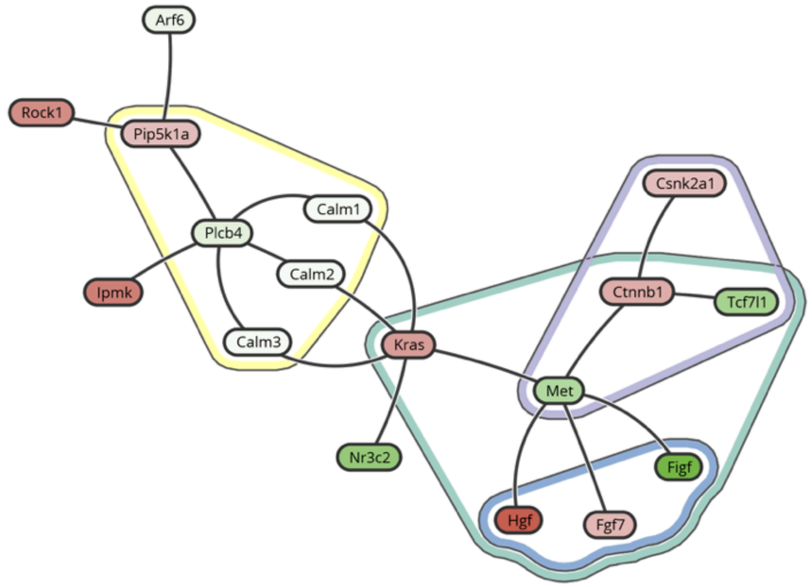
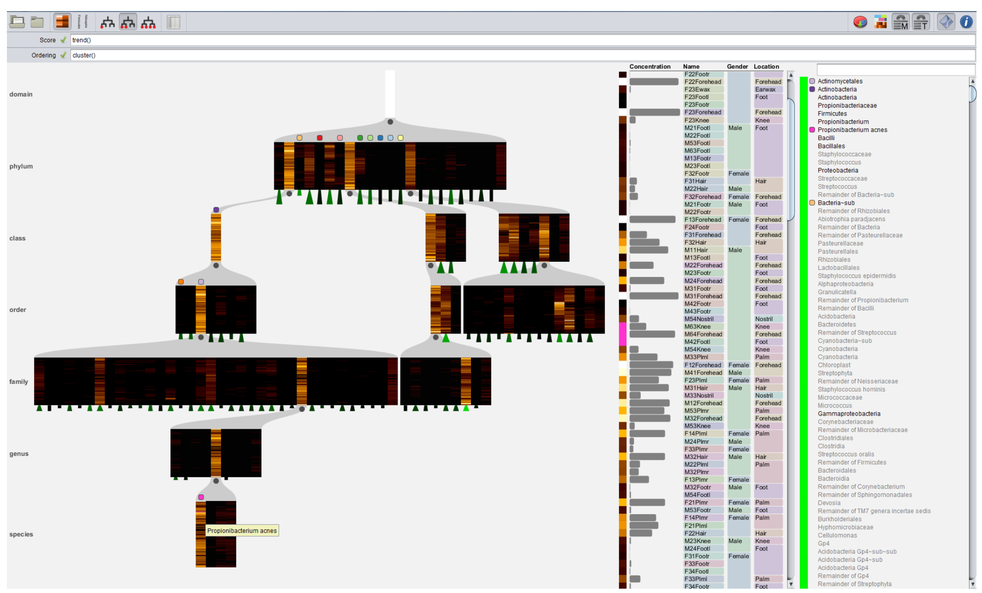
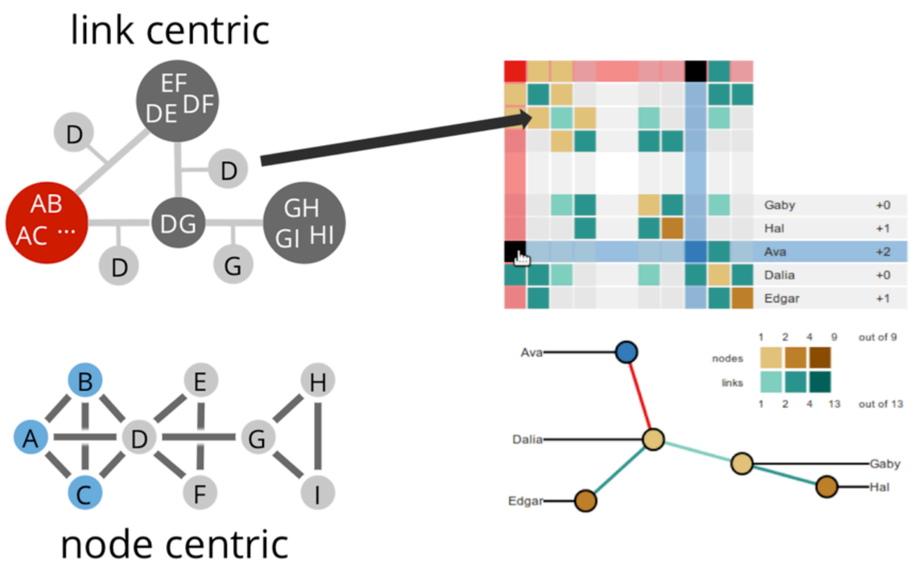


Research challenges

- data complexity, variety, uncertainty
- range of users
- high standards for validity and statistical rigor
- data provenance





Data visualization

Presentation: communicate insights

- What have we learned from the data?
- What patterns, trends, clusters are there?

Exploration: discover features of the data

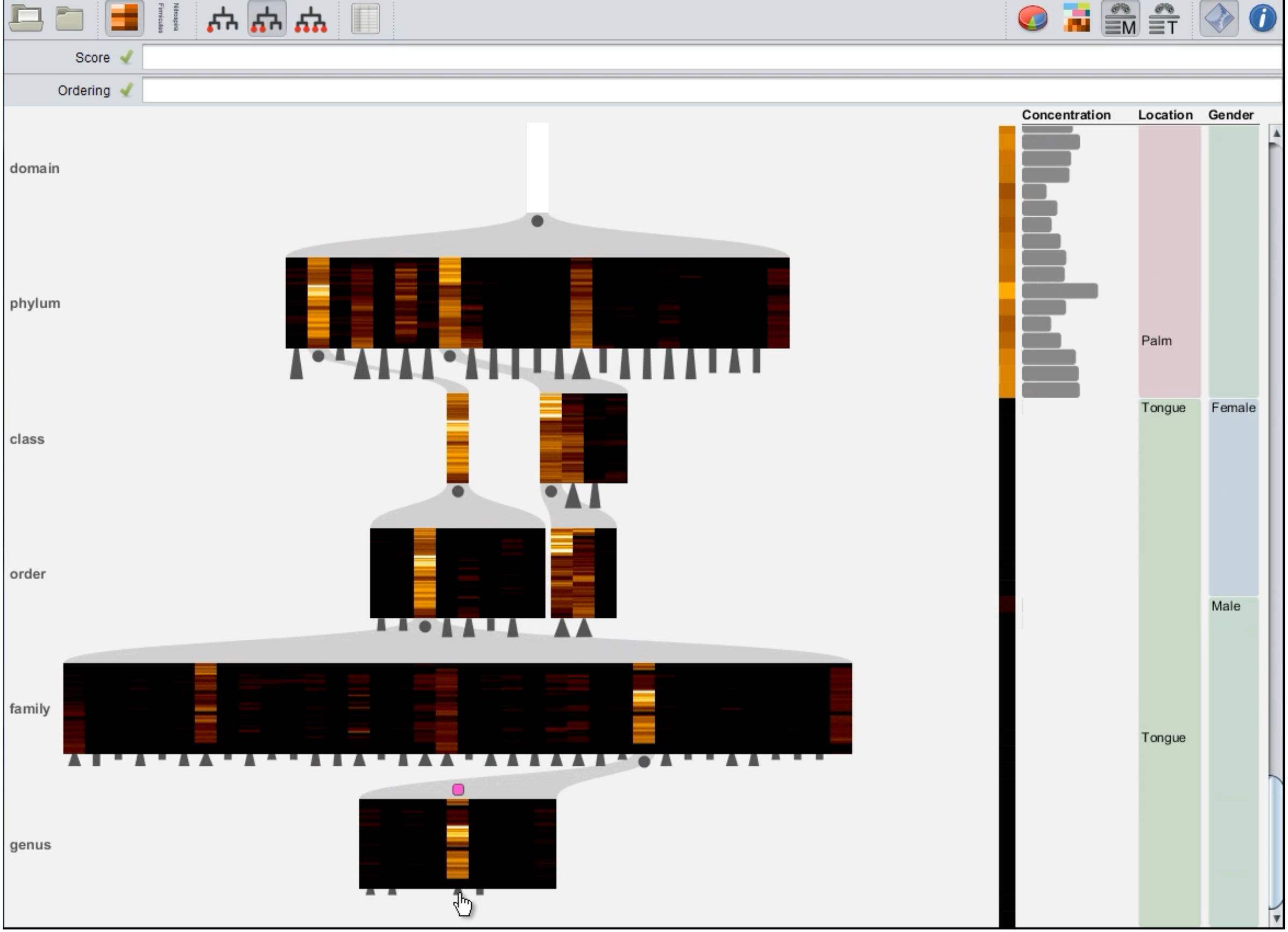
- What attributes are correlated?
- What are the distributions?
- Are my assumptions valid?

Reasoning: support decision making

- Understand relations
- Get the big picture
- Decide what to do

What is visual analytics?

Computer-based visualization systems provide **visual representations** of datasets designed to help people carry out **tasks** more effectively.



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Function

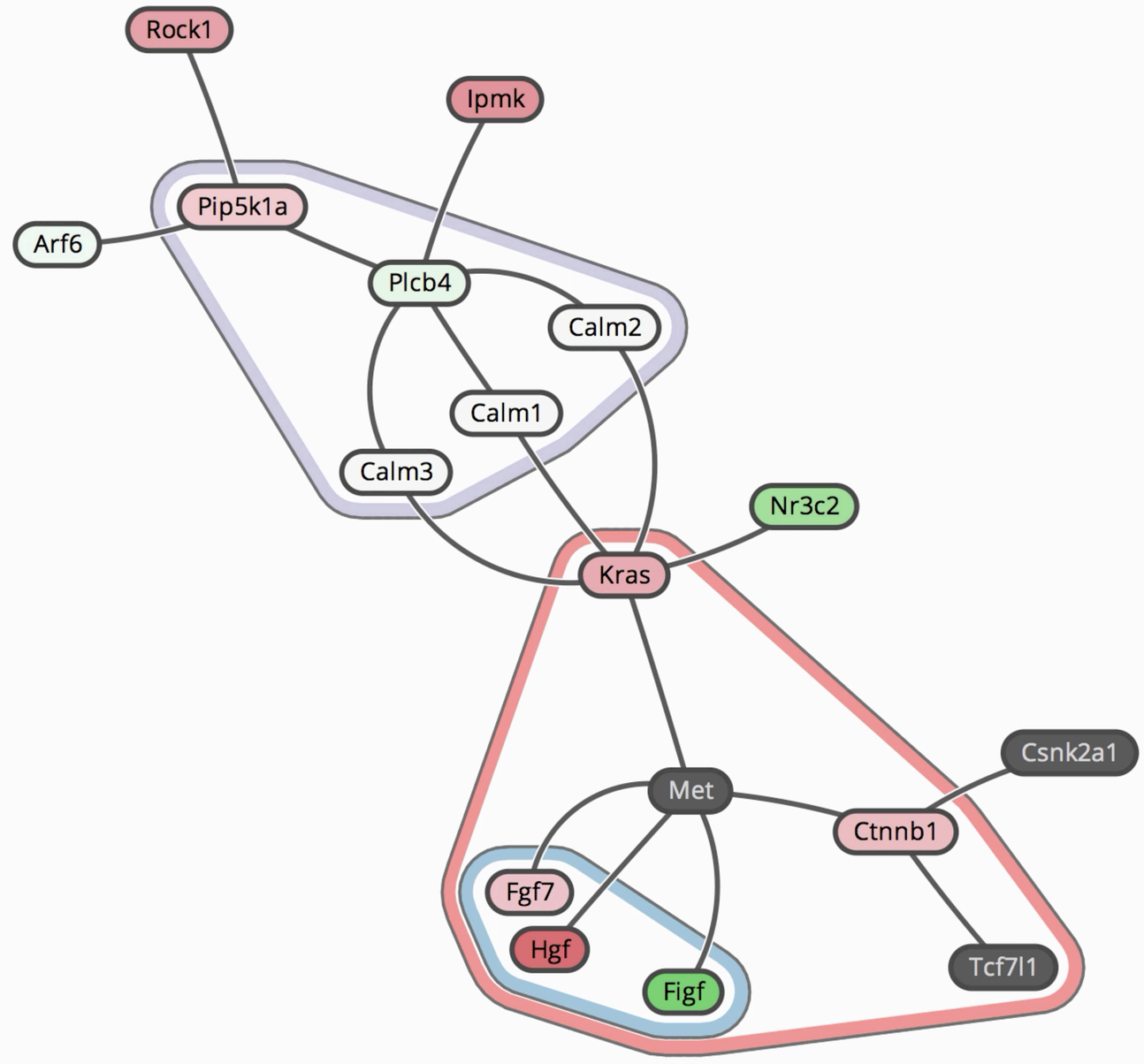
- -3 growth factor activity
- -8 phospholipase binding
- -8 N-terminal myristoylation
- -7 thioesterase binding
- -7 titin binding
- -7 phosphatidylinositol 3-kinase
- -6 protein N-terminus binding
- -5 enzyme binding
- -5 calcium-dependent protein
- -4 beta-catenin binding
- -4 chemoattractant activity
- -3 hepatocyte growth factor-activated
- -3 inositol tetrakisphosphate
- -3 inositol-1... 6-kinase activity
- -3 mineralocorticoid receptor

Pathway

- -6 Phosphatidylinositol signaling
- -6 Pathways in cancer
- -9 Melanogenesis
- -7 Long-term potentiation
- -6 GnRH signaling pathway
- -6 Vascular smooth muscle
- -5 Glioma
- -5 Melanoma
- -5 Gastric acid secretion
- -5 Renal cell carcinoma
- -5 Wnt signaling pathway
- -5 Adherens junction
- -5 Salivary secretion
- -5 Phototransduction
- -5 Thyroid cancer
- -5 Circadian entrainment
- -5 Focal adhesion

Process

Component



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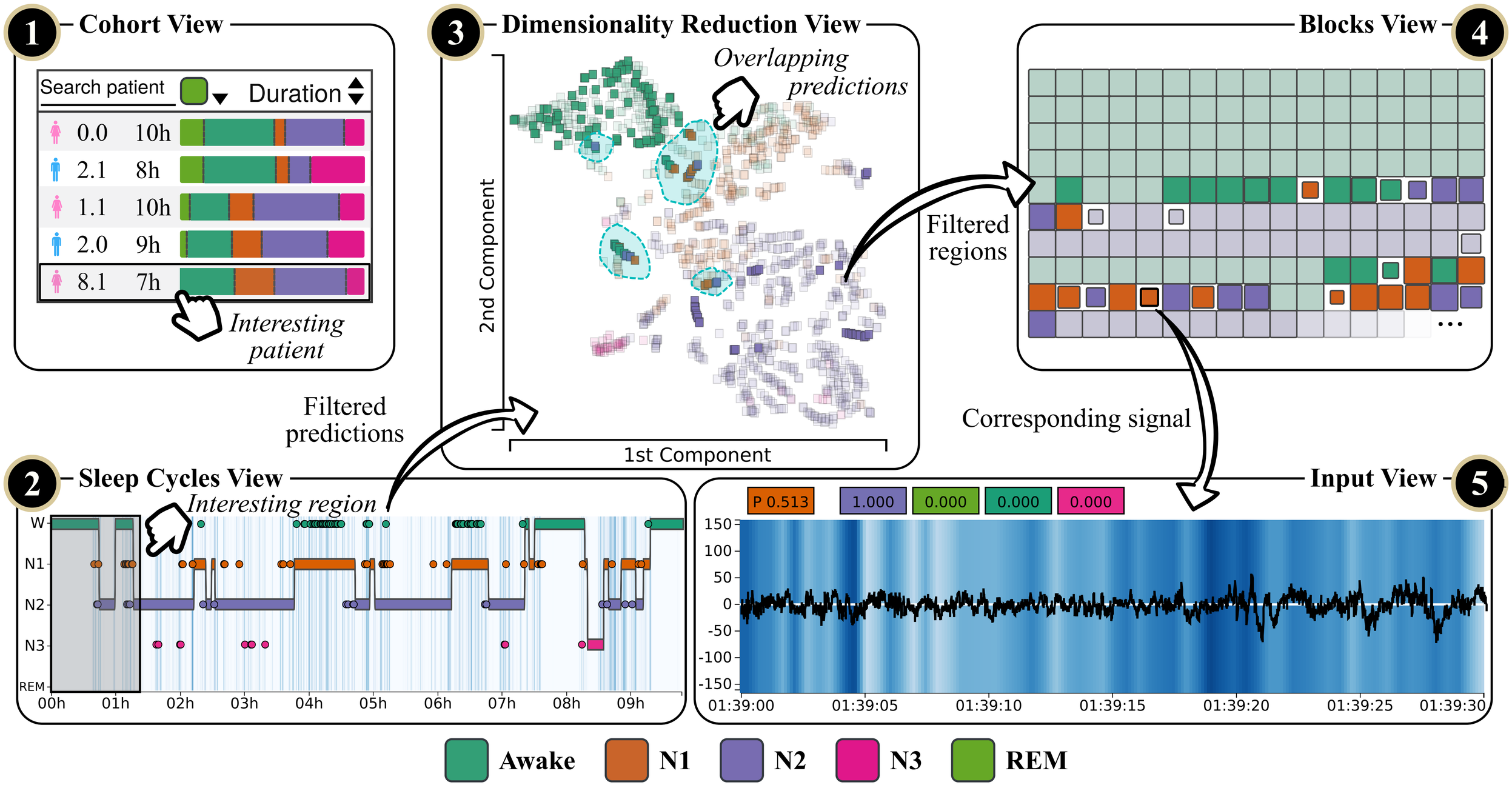

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Questions?