

LSTMVis: A Tool for Visual Analysis of Hidden State Dynamics in Recurrent Neural Networks

Hendrik Strobel, Sebastian Gehrmann, Hanspeter Pfister, and Alexander M. Rush



ACTiVis: Visual Exploration of Industry-Scale Deep Neural Network Models

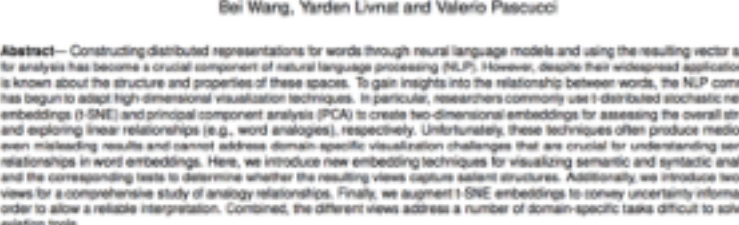
Minsuk Kahng, Pierre Y. Andrews, Aditya Kairo, and Duen Horng (Polo) Chau



Fig. 1. ACTiVis integrates several coordinated views to support explore and analyze deep learning models. (a) Model Architecture: A 3D visualization of the model architecture, showing the flow of data from input to output. (b) Neuron Activation: A 2D heatmap showing the activation of neurons across different layers. (c) Instance Selection: A 2D heatmap showing the selection of specific instances for analysis. (d) Instance Analysis: A 2D heatmap showing the analysis of selected instances, including their classification results and feature distributions.

Visual Exploration of Semantic Relationships in Neural Word Embeddings

Shusen Liu, Peter-Timo Bremer, Jayaraman J. Thiragarani, Vivek Brinkman, Bei Wang, Yarden Lital, and Valerio Pascucci



Abstract—While deep learning models have achieved state-of-the-art results in many tasks, the lack of interpretability remains a major challenge. This paper presents a visual exploration tool for neural word embeddings, allowing users to interactively explore semantic relationships. The tool visualizes word embeddings as points in a 3D space, with axes representing the word, dimension, and distance. It includes a table of word pairs and their corresponding distances, and a 3D visualization of the embeddings.

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DeepEyes: Progressive Visual Analytics for Designing Deep Neural Networks

Nicola Pezzotti, Thomas Hübner, Jan van Gemert, Boudewijn P.F. Lelieveldt, Einar Eide, Anna Vilanova



Abstract—DeepEyes is a Progressive Visual Analytics system for the analysis of deep neural networks during training. The system allows users to interactively explore the network architecture, training process, and performance. It includes a 3D visualization of the network architecture, a 2D heatmap of the training process, and a 2D heatmap of the performance.

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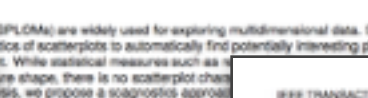
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Skeleton-based Scagnostics

José Maute, Alexandru C. Teles, and Lars Linzen



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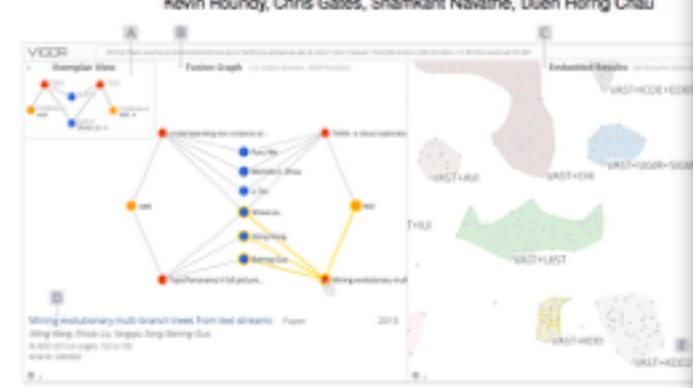
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VIGOR: Interactive Visual Exploration of Graph Query

Robert Pierla, Fred Holman, Alex Endert, Acar Tamersoy, Kevin Roudy, Chris Gates, Shankant Navathe, Duen Horng Chau



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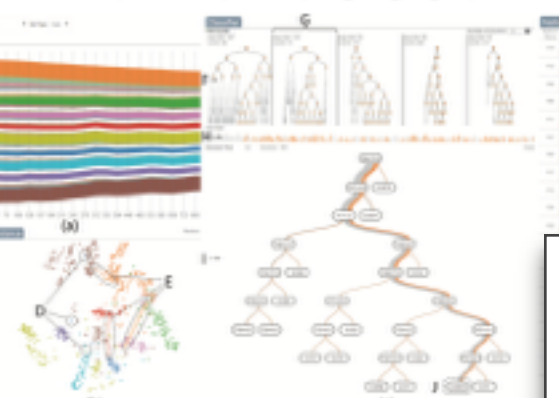
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Visual Diagnosis of Tree Boosting Methods

Shixia Liu, Jianan Xiao, Junliu Xing, Wang, Jing Wu, Jun Zhu



Abstract—Tree boosting is a powerful machine learning technique. This paper presents a visual diagnosis tool for tree boosting methods. The tool allows users to interactively explore the tree structure, boosting process, and results. It includes a 3D visualization of the tree structure, a 2D heatmap of the boosting process, and a 2D heatmap of the results.

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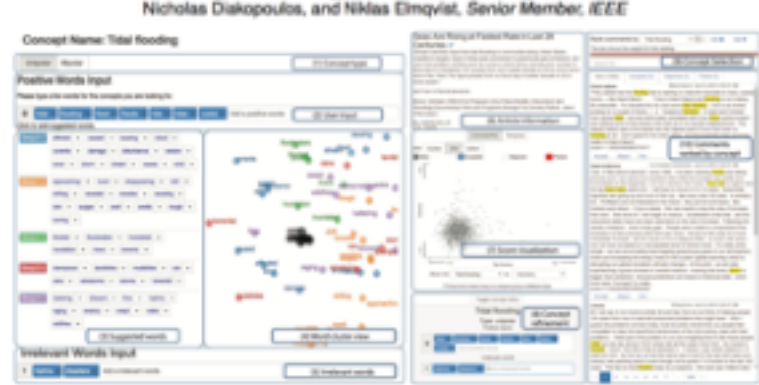
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ConceptVector: Text Visual Analytics via Interactive Lexicon Building using Word Embedding

Deokgun Park, Seungyeon Kim, Jurim Lee, Jaegul Choi, Nicholas Dapkinopoulos, and Niklas Elmquist, Senior Member, IEEE



Abstract—ConceptVector is a text visual analytics tool that allows users to interactively explore text data. It includes a 3D visualization of the text data, a 2D heatmap of the lexicon, and a 2D heatmap of the word embeddings.

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Visual Supervision of Unsupervised Clustering

Bun Chul Kwon, Ben Eysenbach, Jan Venna, N. Christopher deSilva, Walter F. Stewart, and Adam Porter



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Dimensionality Reduction

