IrEne-viz: Visualizing Energy Consumption of Transformer Models

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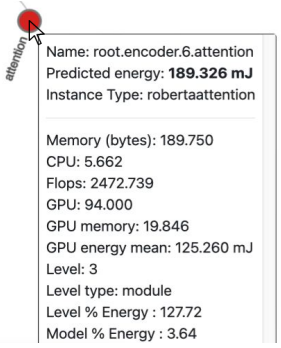
Overview

- Software-based energy measurements are inaccurate (Cao et al, 2020)
- IrEne-viz presents an interactive demonstration of energy consumption of different models and their components

IrEne-viz can help

- Identify specific bottlenecks in a model in order to increase energy efficiency
- Tailor models for a specific use case e.g., battery-powered mobile devices

Energy Information

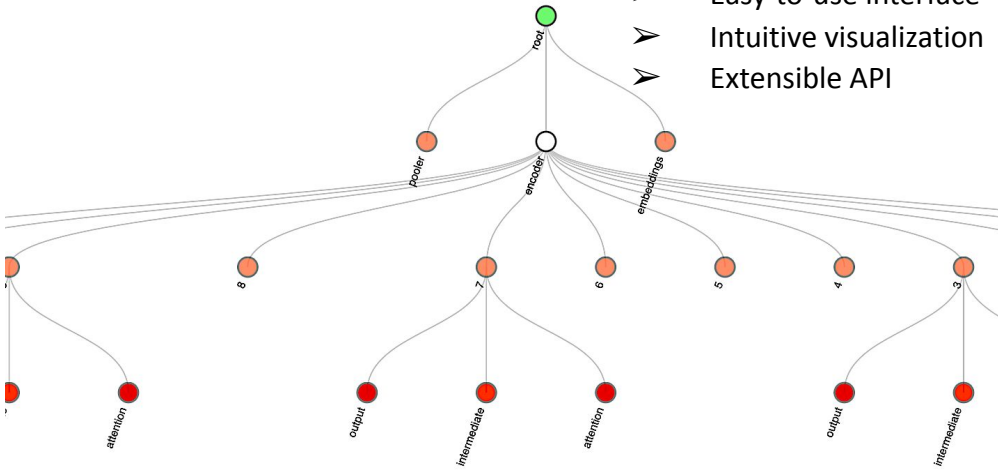


Identify Bottlenecks

Node Name	Pred. Energy (mJ)
transformer	2015.527
transformer.5	307.248
transformer.0	307.247
transformer.1	307.247
transformer.2	307.247
transformer.3	307.247

Interpretable model energy

- Easy-to-use interface
- Intuitive visualization
- Extensible API



Check out the Demo!

Or, come find us

stonybrooknlp.github.io/irene/demo

References

Cao et al, 2020. *Towards Accurate and Reliable Energy Measurement of NLP Models*, SustainNLP 2020