/ 10

Laurent Perrinet - Montreal AI and Neuroscience conference, December 13th, 2025 - Montréal, Québec

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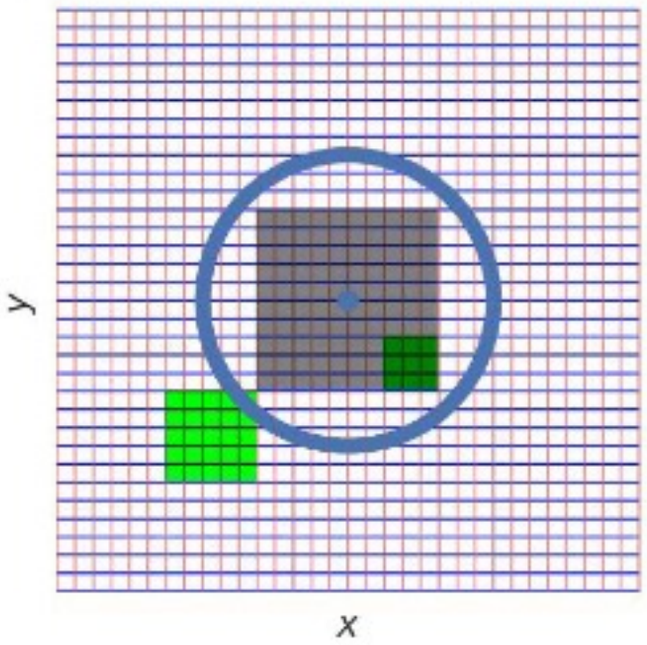
ConvNets got a new look: logpolar map

Jean-Nicolas Jérémie, Emmanuel Daucé, Laurent U Perrinet (2025). Foveated Retinotopy Improves Classification and Localization in CNNs. arXiv:2402.15480

Jean-Nicolas Jérémie

Emmanuel Daucé

A


y
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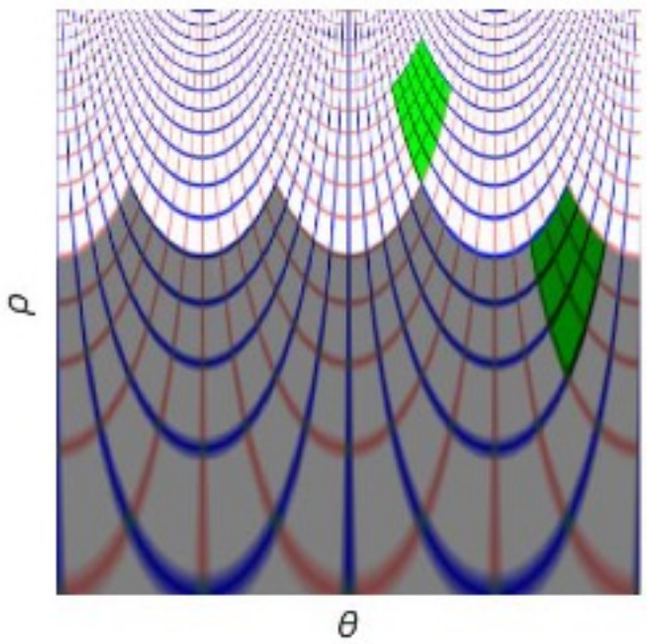
B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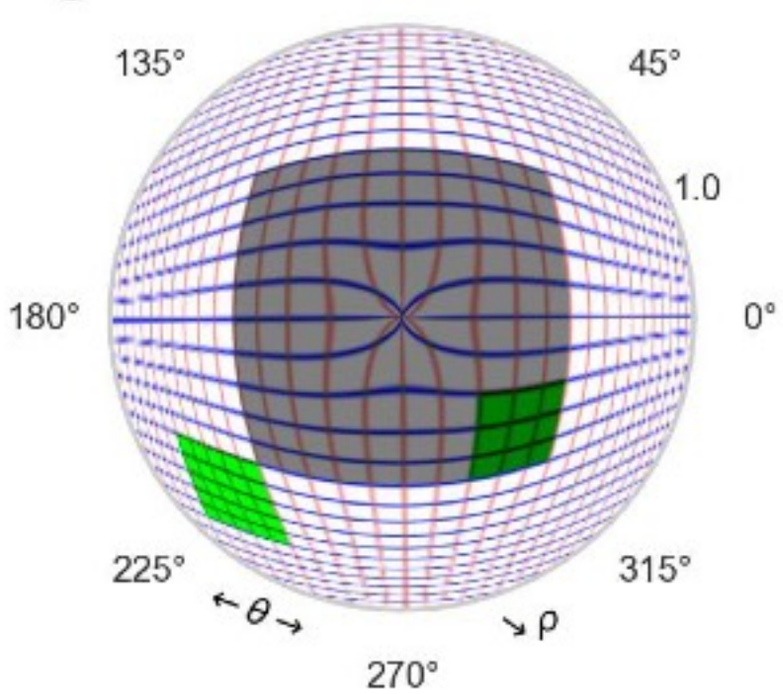
C


90°
135°
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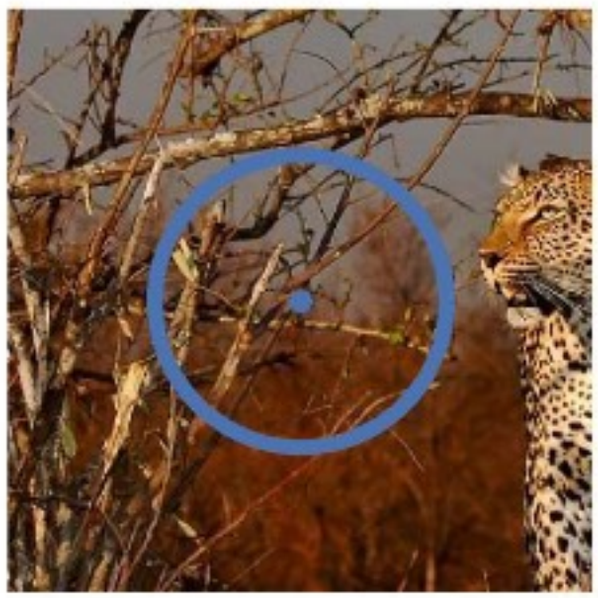
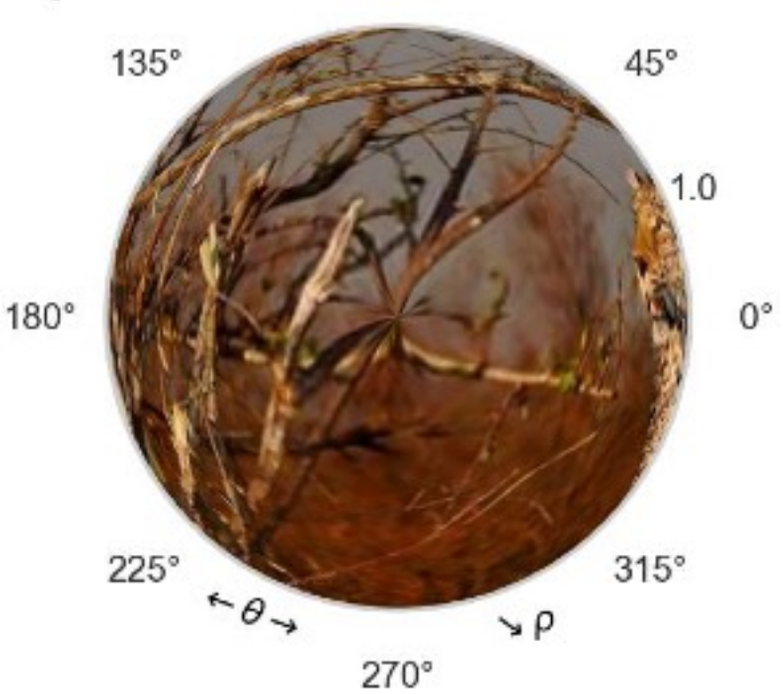
ρ
270°

D



E

F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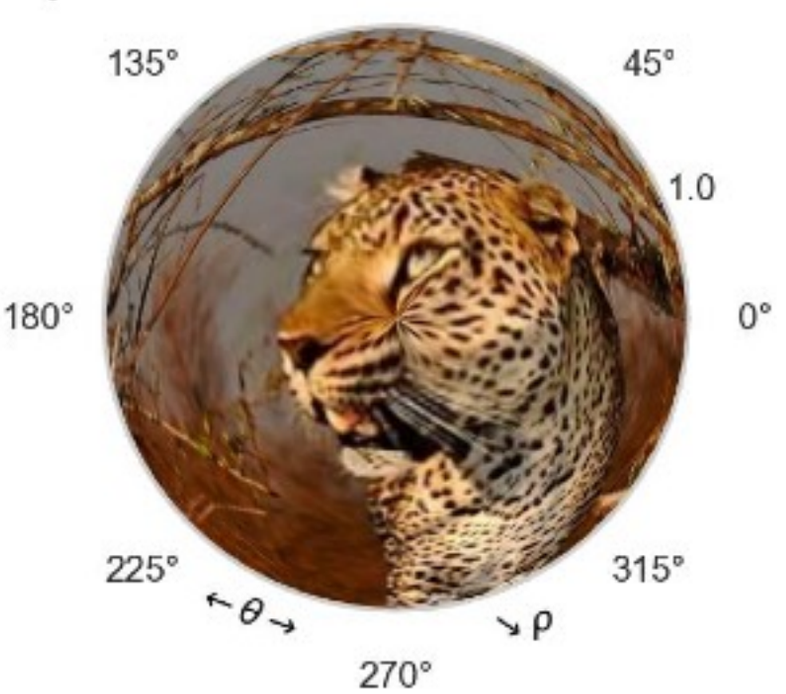
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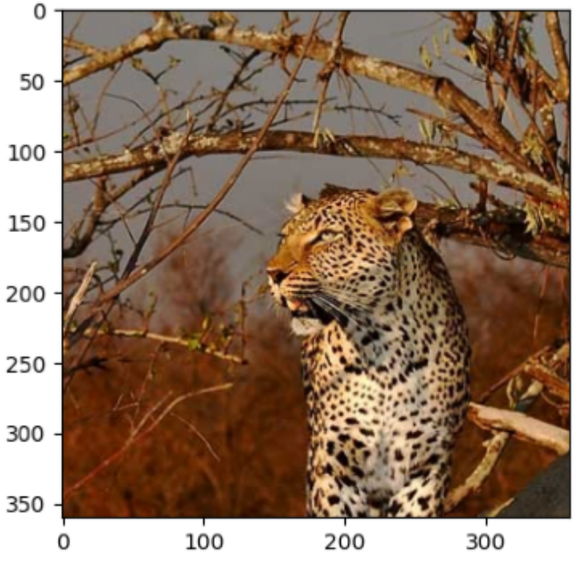
Uniform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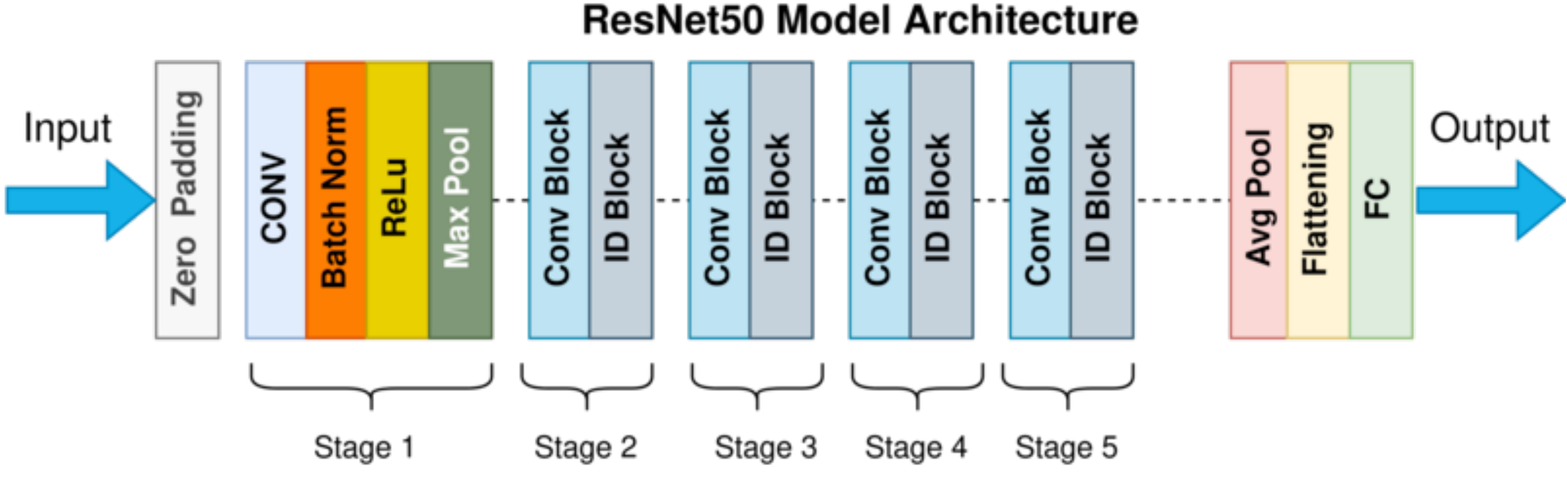
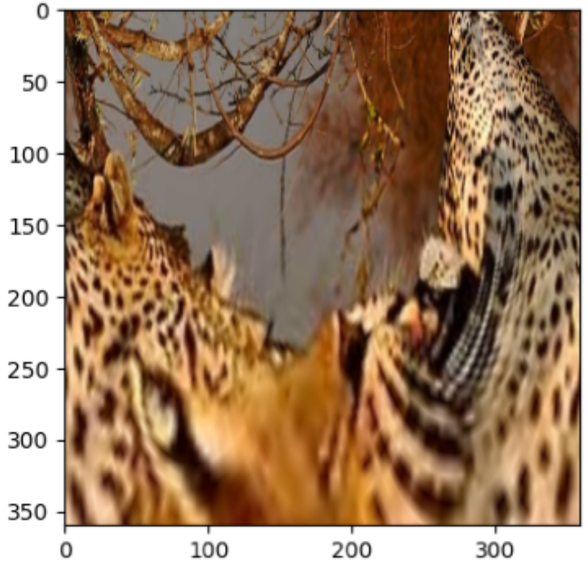

ResNet50 Model Architecture
Input
Zero Padding
CONV
Batch Norm
ReLu
Max Pool
Conv Block
ID Block
Conv Block
ID Block
Conv Block
ID Block
Conv Block
ID Block
Avg Pool
Flattening
FC
Output
Stage 1
Stage 2
Stage 3
Stage 4
Stage 5

Foveated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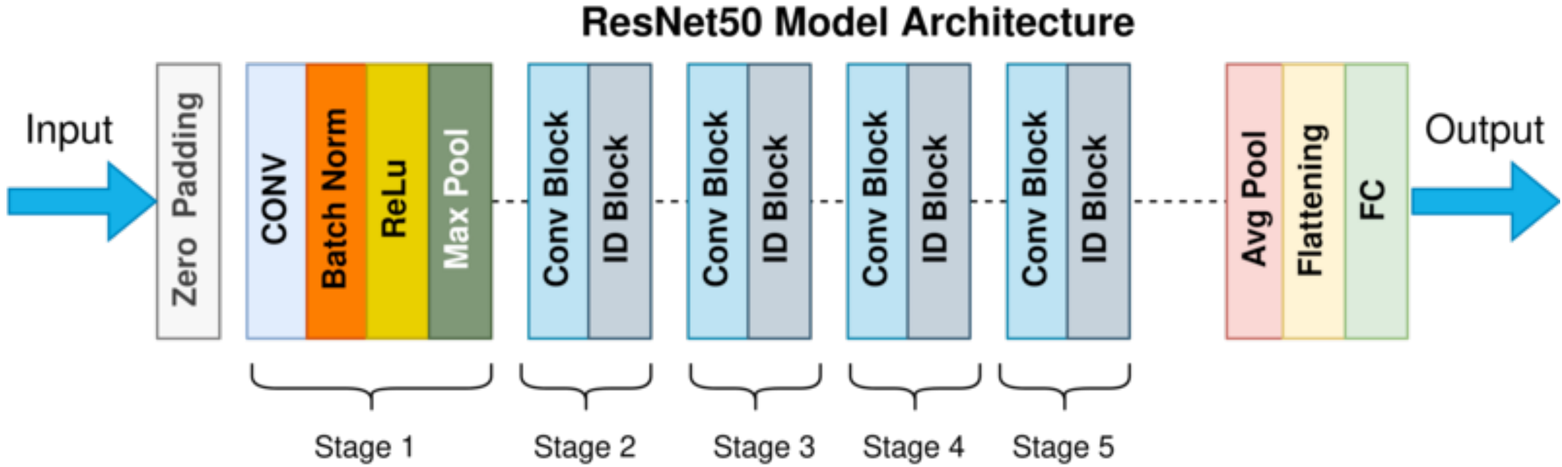
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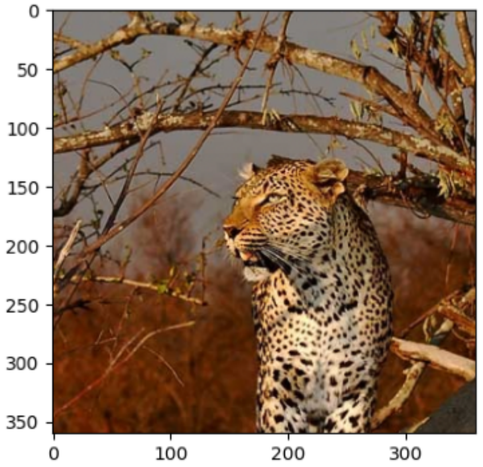
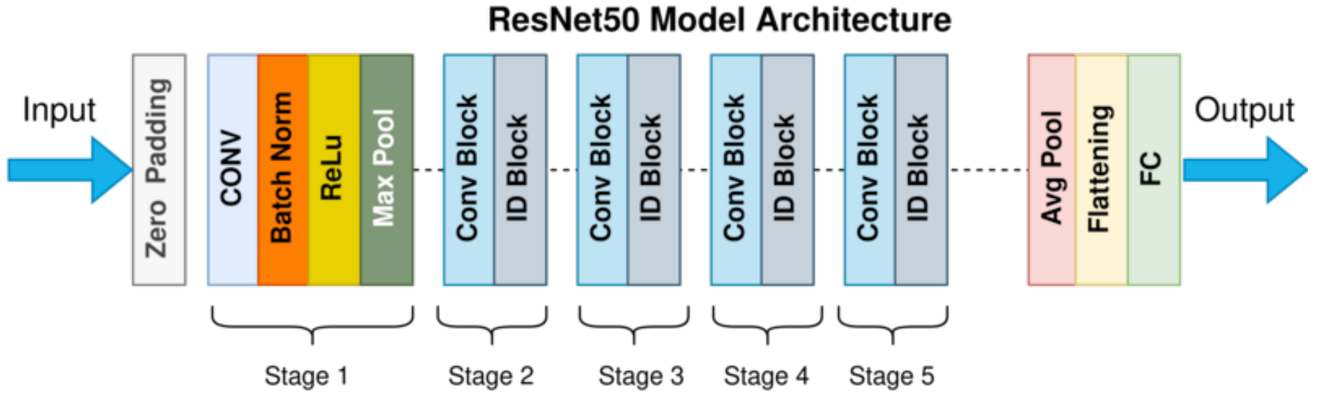
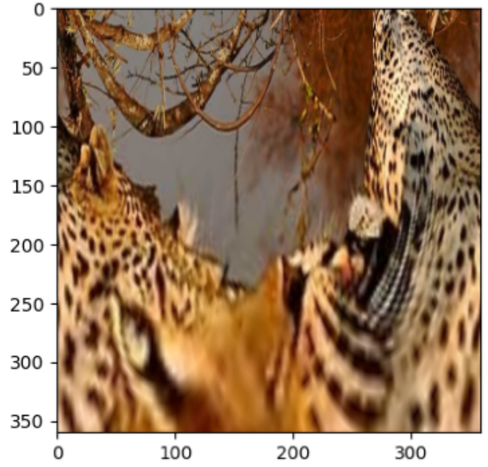
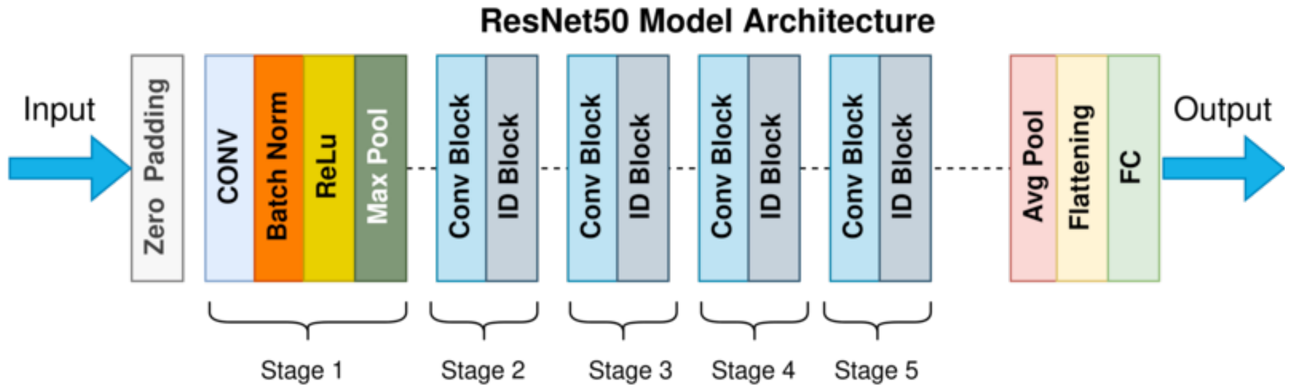


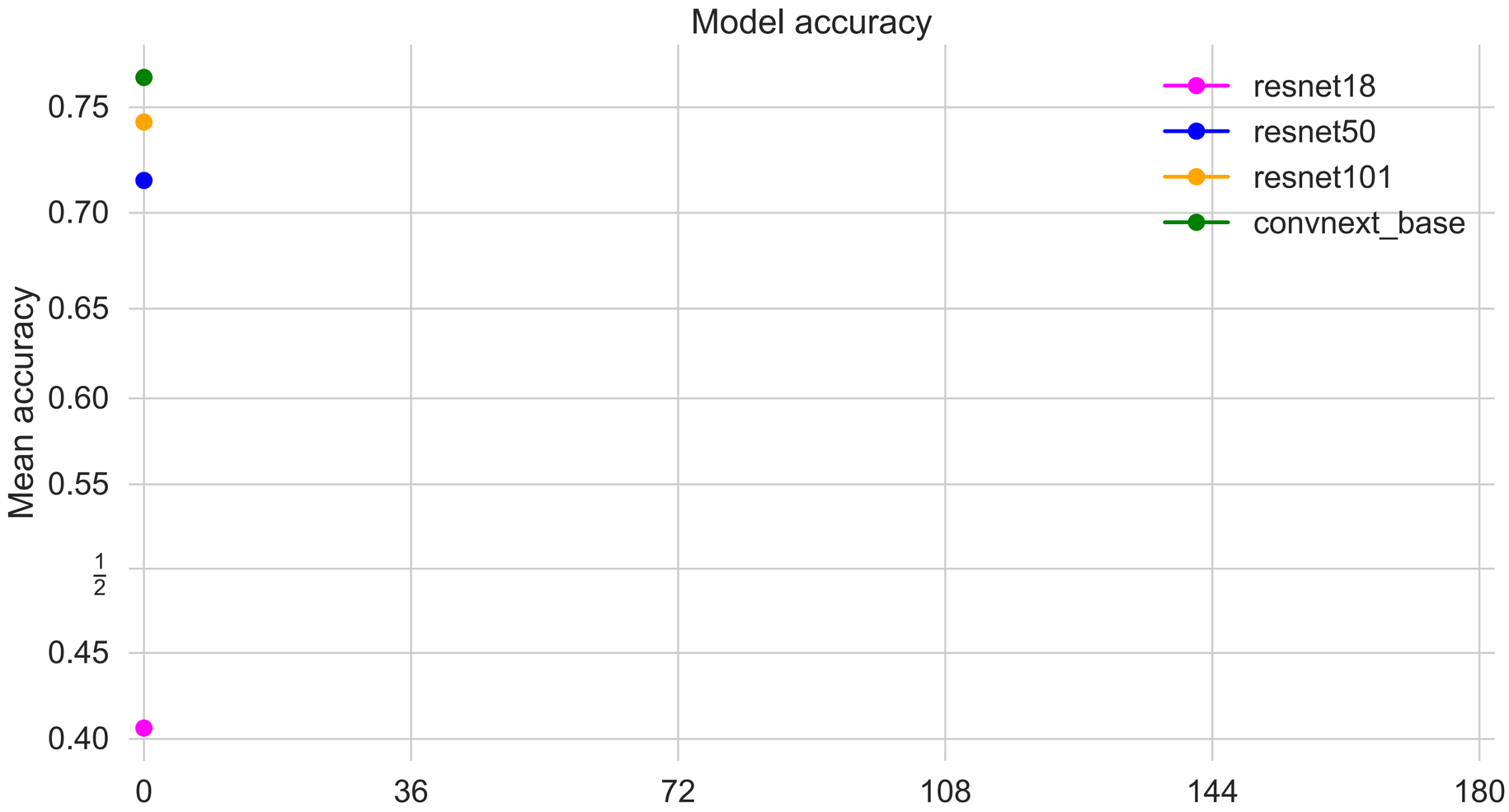


Emmanuel Daucé

Foveated





Jean-Nicolas Jérémie

ConvNets got a new look: results