



NEURAL NETWORK THAT CAN LEARN: CREATING FROM SCRATCH

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Github repo (currently in dev branch):

<https://github.com/luciangruiaro/neural-networks/tree/dev>

Tech stack

- Programming Languages: Java 17, Python 3.11, Javascript
- Java stack: Spring Boot, Spring Web, Thymeleaf, Lombok, org.json, Log4j
- Python stack: numpy, tensorflow, matplotlib, scikit-image
- Javascript: d3js

Key concepts discussed:

- Neuron, synapse, Learning, emergence
- Weights, Activation function, Loss function, Gradient, Learning rate, Neural network parameters
- Training, Testing, Epochs
- Neural network architecture, Neural layers, Deep Learning

Related talks:

- AI state of the art 2022: Building AI apps with Java, Tensorflow & DeepLearning4j
<https://youtu.be/J7q0WKNiPi0?si=ChhoqtCN-ObkPPXY>
- Building full stack AI chatbots with Java | Live coding session
https://youtu.be/Mig5x4K_OoY?si=E8d3kYxBUh6lbORI

Related articles:

- <https://www.linkedin.com/build-relation/newsletter-follow?entityUrn=6960521797251284992>
- <https://neuroaugmentare.ro/tag/learn-ai-in-2022-the-complete-guide/>

Resources:

- <https://github.com/mrsaeddev/free-ai-resources>
- <https://www.cs.huji.ac.il/~shais/UnderstandingMachineLearning/understanding-machine-learning-theory-algorithms.pdf>
- <https://arxiv.org/pdf/1409.3215.pdf>
- <https://arxiv.org/pdf/1706.03762.pdf>
- <https://arxiv.org/pdf/1712.01815.pdf>
- <https://www.deeplearning.ai/courses/>