

Product Vision

Neronet

*Toolbox for managing the training
neural networks*

CSE-C2610
Software Project
Aalto University

April 12, 2016



Outline

Why

What

For whom

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Why – business view

Currently available state-of-the-art tools and systems for computational research could be improved.

Researchers are slowed down by lack of good easy tools for practical everyday difficulties like

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This leads to ineffective use of man and machine hours.

What – product goals

The product's goal is to enable easy

1. specification of experiments and management of queues
2. batch submission of experiment jobs to computing clusters

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4. access to experiment information during and after the run
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6. configurable criteria for experiment autotermination

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7. logging of experiment history
8. preferences configuration

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The goals should be achieved in a generic way suitable for many different computational problem areas and experiment types.

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Potential extra goals:

1. visualisation and analysis of experiment data
2. some neural networks specific functionality

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Nonfunctional requirements:

1. low computational and memory overhead
2. good usability
3. easily maintainable and extensible
4. open source

For whom – users

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The envisioned users are all individuals who run long lasting computational experiments and appreciate progress feedback. The potential user segments include for instance:

- ▶ Deep learning researchers
- ▶ Machine learning researchers
- ▶ Computational physics researchers
- ▶ Computational bioscience researchers
- ▶ Data science practitioners
- ▶ Enthusiasts & hobbyists