

# Product Vision

## Neronet

*Toolbox for managing the training  
neural networks*

CSE-C2610  
Software Project

Aalto University

November 14, 2015

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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- ▶ getting information about the computing environment

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- ▶ analysing and comparing the results of experiment variations

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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
5. configurable notifications on experiment state and progress
6. configurable criteria for experiment autotermination

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6. configurable criteria for experiment autotermination
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