Progress report

Neronet

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Neronet

Toolbox for managing the training neural networks

CSE-C2610
Software Project

Aalto University

December 3, 2015

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Outline

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Introduction
Goals

Our goal is to develop a tool for computational researchers to enable easy

- specification and management of experiment queues

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- ▶ configurable notifications on experiment state and progress

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- ▶ configurable criteria for experiment autotermination

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- logging of experiment history

Introduction
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- ▶ It utilizes SSH and TCP sockets to distribute the computational workload into computer clusters. It supports the Slurm job and resource manager but can function without it as well.
- ▶ It is framework agnostic in that it permits the use of a very wide variety of tools to actually conduct the computing.

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Results
Sprint 0

Goal: Team building and preparing for sprint 1

Results
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Goal: Team building and preparing for sprint 1 Done

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Product Backlog Items: *None*

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Sprint 0 took a lot of effort from us since the project topic
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We were proud of our efforts in the sprint.

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Sprint 1

Goal: Develop a prototype that offers the most basic functionality via a CLI

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Product Backlog Items:

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Just a prototype, a lot of work to do before user testing.

Demo

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Demo script:

1. Presentation of Neronet's CLI user guide
2. Neronet Installation, preferences and initial setup of clusters
3. Specification of clusters via CLI
4. Specification of an experiment
5. Submission of the specified experiment to an unmanaged node
6. Retrieval of experiment status report
7. Experiment status report

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Quality

Definition of done:

- We defined Done in three levels: BI, sprint and project
- BI level: unit test coverage 90%, functional test coverage 80%, conformity (PEP-8), commented, documented, peer reviewed
- Sprint level: BI:s are Done, increment is tested and reviewed, sprint goal is achieved
- We have followed our DoD almost as planned.

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Quality

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US	UTC	FTC	Com	Doc	Rev
1	-	0%	0%	0%	0%
2	0%	0%	0%	0%	0%
3	0%	0%	0%	0%	0%
4	0%	0%	0%	0%	0%
5	0%	0%	0%	0%	0%
	0%	0%	0%	0%	0%

Qualitatively we achieved our standards only partially:

▶ Unit and functional test coverage – only satisfactory

▶ Quality of comments and documentation – mediocre

▶ Peer review – done quickly

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Quality

Used QA practices and tools:

- Python standard unittest framework
- Peer review

Relevant quality attributes:

- Usability
- Reliability
- Extendability
- Performance

Effort

S	Sa	Te	Tu	Jo	Ii	Ma
0	140/50	36/35	45/35	40/35	36/35	43/35
1	28/30	22/33	25/33	30/33	20/33	25/33
2	0/30	0/33	0/33	0/33	0/33	0/33
3	0/15	0/33	0/33	0/33	0/33	0/33
4	0/15	0/33	0/33	0/33	0/33	0/33
5	0/15	0/33	0/33	0/33	0/33	0/33
6	0/20	0/25	0/25	0/25	0/25	0/25
	168/175	58/225	70/225	70/225	56/225	68/225

Retros: Sprint 0

Sprint planning:

- ▶ backlog items must be clear and simple -teemu
- ▶ backlog items have been unclear, but the user guide probably helps
- ▶ it would have been better if the PO had created the stories from scratch -matias, tuomo
- ▶ the PO should give input when developing the user guide
- ▶ we should make sure we reserve enough time for the actual story selection on Monday -matias

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Retros: Sprint 0

Daily scrums:

- ▶ we have mostly been doing teamwork, so there has been little new info in the scrums -Matias -Joona -Teemu
- ▶ they have been overly long and they have extended due to inexperience.
- ▶ people are late.

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Retros: Sprint 0

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Teamwork sessions:

- sessions are too long and sometimes people get hungry.
- generally someone has to leave early or comes late

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Retros: Sprint 0

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Tools:

- ▶ flowdock is good x6
- ▶ for remote work we have been using google hangout and skype. Skype has proven to be the most stable.
- ▶ for faster communication we are using whatsapp.
- ▶ agilefant has a steep learning curve. -liro
- ▶ people tend to forget to log their time at agilefant.
- ▶ hope to use more github during sprints
- ▶ floobits ain't very good. Doesn't seem to work in its intended purpose.
- ▶ Top 3 tools: 1) GitHub 2) Flowdock 3) Agilefant
- ▶ Worst 3 tools: 1) Floobits 2) Six tactics 3) Agilefant

Retros: Sprint 0

How teamwork could be improved:

- ▶ People should be more on time.
- ▶ hard to think on improvements on sprint 0