Progress report

Neronet

Toolbox for managing the training neural networks

CSE-C2610
Software Project

Aalto University

December 4, 2015

Aalto University
School of Science
and Technology

Outline

Introduction

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- logging of experiment history

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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.

Results

Sprint 0

Goal: *Team building and preparing for sprint 1*

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Just a prototype, not ready for release to users.

Demo

Demo script:

1. Neronet Installation, preferences and initial setup of clusters
2. Specification of clusters via CLI
3. Specification of an experiment
4. Submission of the specified experiment to an unmanaged node
5. Retrieval of experiment status report

Quality

Definition of done:

- We defined Done in three levels: BI, sprint and project
- BI level: unit tests done where applicable, functional test coverage 80%, conformity (PEP-8), commented, documented, peer reviewed
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- Updates to DoD:
  - We replaced *unit test coverage 90%* with *unit tests are written where applicable* – the old metric was not useful for all BIs
- Otherwise, we have followed our DoD as planned.

Quality

Used QA practices and tools:

- Commenting & documentation – forces to rethink from another perspective, facilitates peer review
- Python standard unittest framework – white-box test automation
- Functional testing – manual black-box testing based on specs
- Peer review – quality assurance

Quality

Performance in quality assurance practices peer-graded with scale 0-3:

US	UT	FT	Com	Doc	Peer
1	3	3	3	3	3
2	2	2	3	2	3
3	3	3	3	3	3
4	3	3	3	3	1
5	1	3	2	1	1
	2	3	3	2	2

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Qualitatively we achieved our standards only partially:

- Unit and functional test coverage – good
- Quality of comments and documentation – good
- Peer review – ok (done rather quickly)

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- Performance – At the moment, our software's performance is ok

Effort

Spent and budgeted effort in hours by team member and sprint:

S	Samuel	Teemu	Tuomo	Joona	Iiro	Matias
0	140/50	36/35	45/35	40/35	36/35	43/35
1	51/30	37/33	42/33	46/33	32/33	37/33
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
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6	0/20	0/25	0/25	0/25	0/25	0/25
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- Our team members were very inexperienced
- The project's problem domain was challenging to understand
- Studying existing products and technologies took a lot of time
- The scrum master has been forced to spend a lot of effort also as team leader as well as lead developer.

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Retros: Sprint 0

Sprint planning:

- BI clarity and simplicity (user guide helps)
- It might have been better if the PO had created the stories from scratch -Matias, Tuomo
- We should actively seek more input from PO when developing the user guide
- we should make sure we reserve enough time for the actual story selection on Monday -Matias

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.

Retros: Sprint 0

Teamwork sessions:

- Sessions are too long and sometimes people get hungry
- Generally someone has to leave early or comes late

Retros: Sprint 0

Tools:

- Flowdock is good x6
- Agilefant has a steep learning curve. -Iiro
- People tend to forget to log their time at agilefant
- Github hasn't been used much. Hope to use it more during future sprints
- Floobits is very buggy.
- 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
- Scrum Master shouldn't have to work as a team leader too.
- Hard to think of improvements since we haven't really started coding yet