Progress report

Neronet

Toolbox for managing the training neural networks

CSE-C2610
Software Project

Aalto University

December 4, 2015

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Introduction

Goals

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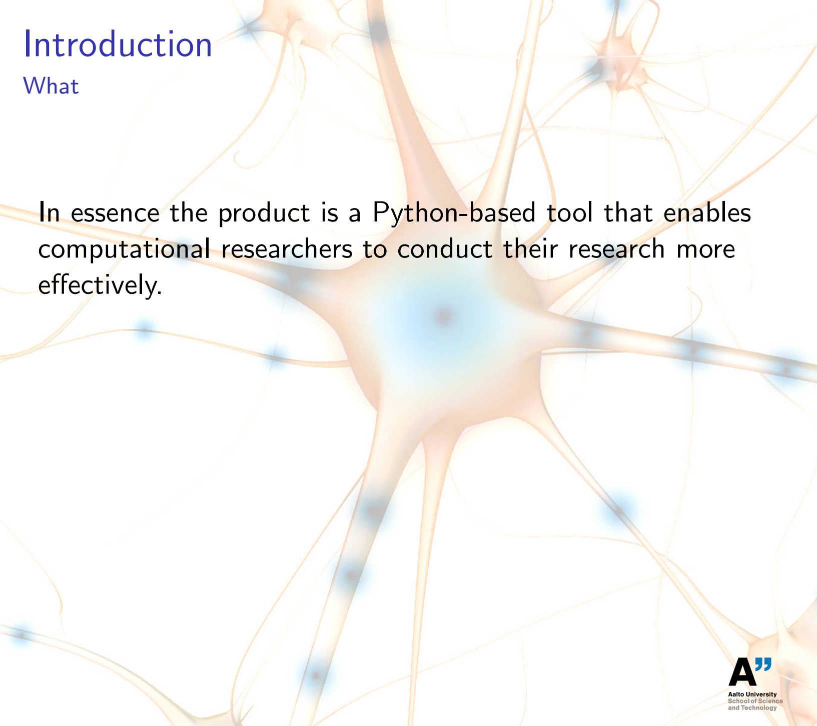
- configurable criteria for experiment autotermination
- logging of experiment history

Introduction

What



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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

Results

Sprint 0

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

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
- Sprint level: BI:s are Done, increment is tested and reviewed, sprint goal is achieved
- 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

US	UTC	FTC	Com	Doc	Rev
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

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)

Quality

Used QA practices and tools:

- Commenting & documentation – forces to rethink from another perspective, facilitates peer review
- Python standard unittest framework – test automation
- Peer review – quality assurance

Quality

Relevant quality attributes:

- Usability – We developed a basic user guide in the first sprint which will help even newbies understand our software → The usability of our software should be good
- Reliability – Unfortunately, we didn't have as much time to test our software in the first sprint as we'd hoped. We will make up for this by using more of our second sprint for testing and less for making new features
- Extendability – At the moment our software's extendability is ok, difficult to say anything about the final product
- Performance – At the moment, our software's performance is ok

Effort

S	Sa	Te	Tu	Jo	Ii	Ma
0	140/50	36/35	45/35	40/35	36/35	43/35
1	46/30	28/33	33/33	38/33	25/33	33/33
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
	186/175	64/225	78/225	78/225	61/225	76/225

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

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
- 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. -Iiro
- 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