Process Overview

Neronet

Toolbox for managing the training neural networks

CSE-C2610
Software Project

Aalto University

March 3, 2016

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Outline

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Sprints

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S	Start	End	D	Sa	Te	Tu	Jo	Ju	Ii	Ma
0	19.10.	13.11.	25	50	35	35	35	35	35	35
1	13.11.	4.12.	21	30	33	33	33	33	33	33
2	4.12.	13.1.	38	30	33	33	33	33	33	33
3	13.1.	1.2.	21	20	33	33	33	33	33	33
4	1.2.	29.2.	28	15	33	33	33	33	33	33
5	29.2.	18.3.	21	15	33	33	33	33	33	33
6	18.3.	11.4.	21	15	25	25	25	25	25	25

Note

▶ S2 includes exams (7.-18.12.) and holidays (23.12.-1.1.)

▶ S4 includes exams (15.-19.2.)

▶ S6 includes exams (4.-9.4) and is reserved for mainly
   polishing & documenting for final review (11.-13.4.)

Events

Time	Event	Participants
30.10. 16-18	Project kickoff	team, PO
13.11. 15-17	S0 demo	team, Coach
16.11. 11-13	S1 planning	team, PO
04.12. 16-17	S1 & progress review	team, PO, Coach
04.12. 17-18	S2 planning	team, PO
13.01. 19-20	S2 review & S3 planning	team, PO
01.02. 14-16	S3 review & S4 planning	team, PO
29.02. 13-14	S4 & progress review	team, PO, Coach
29.02. 14-15	S5 planning	team, PO
18.03. 17-19	S5 review & S6 planning	team, PO
1?.04. ??-??	S6 & progress review	team, PO, Coach
19.04. 16-20	Closing party and demos	team, PO, Coach

All events, locations, agendas and other details are uptodate in Google Calendar.

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Recurring events:

- ▶ Sprint planning
- ▶ Sprint review
- ▶ Sprint retrospective
- ▶ *Daily* scrums
- ▶ Teamwork sessions

Sprint planning

A sprint planning session is organized at the start of each sprint.

1. Before the session
   - the PO makes sure the product backlog contains an ordered list of items with a description and a number depicting business value
   - the team plays planning poker to define effort estimates (story points) for each BI
2. During it the team and the PO
   - briefly define the increment's purpose, the sprint goal
   - move BIs from the product backlog to the sprint backlog
3. After it, the team
   - chews the BIs into smaller tasks
   - assigns effort estimates on the tasks by planning poker
   - assigns a developer and a reviewer to each task

However, since sprint 3 we've done all this in the same session due to increased efficacy/experience.

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Sprint review

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At the end of each sprint, we

- demonstrate the stories we were able to get *done*
- adapt the product backlog based on the results, if needed

Sprint retrospective

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In first two sprints, after each sprint review, we

- ▶ evaluate and rank teamwork practices
- ▶ discuss how teamwork could be improved
- ▶ remove/replace any bad practices
- ▶ plan implementation of new improvements
- ▶ give feedback to sprint team leader

Sprint retrospective

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Currently we're going through these steps

- ▶ Visiting and updating the team's DoD
- ▶ Visiting and reviewing the commitments done in the last sprint retrospective
- ▶ Identifying things the team should start, stop or continue doing
- ▶ Listing actionable commitments

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Daily scrums

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During the first two sprints we carried out a daily scrum on Wednesdays and Fridays in which everyone quickly explains what

- ▶ they did since last Scrum
- ▶ problems they have encountered or might soon encounter
- ▶ they plan to do before the next Scrum

Work plans were adjusted depending on input.
Since then we've started to carry out daily scrums only once a week.

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Teamwork sessions

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Most weeks, we'll

- have a Scrum and a 6h session on Wednesdays
- have a Scrum and a 5h session on Fridays
- do some individual work remotely to cover up any missed sessions

Team sessions are mainly held in Maari. The team leader leads the sessions.

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Used practices and tools:

- ▶ Testing & quality assurance: DoD, Travis CI
- ▶ Communication: Email, Flowdock, Hangout/Skype, WhatsApp
- ▶ Backlog management: Agilefant
- ▶ Time tracking: Agilefant
- ▶ Version control: GitHub
- ▶ Collaboration: Floobits, ShareLaTeX, Google Drive
- ▶ Motivation: Team Spirit Recap

Quality assurance

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We guarantee quality by making

- sure team members adhere to the DoD.
- each member responsible for the quality of the code he reviewed.
- the PO is responsible for the business value of sprint goals and BIs and for making sure the team understands them.

Communication

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We use the following channels:

- ▶ Email - communication that involves external parties
- ▶ Flowdock - general forum for everyday discussion with the team, the PO and/or Coach
- ▶ WhatsApp/Phone - urgent development team communication
- ▶ Skype/Hangout - remote teamworking sessions, especially with the PO

The scrum master and sprint team leader are responsible that all parties are in the same boat.

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Backlog management

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Agilefant is used for all backlogs.

- Version 1 - the product backlog
- Sprint 0-6 - the sprint backlogs

Time tracking

We track our worktime with Agilefant. We log each work session duration to the story or task we worked on.

Version control

We use Git with GitHub and branches:

- **stable** - tested and working version
- **sprint** - increment work in progress
- story$X$ - story work in progress

Our development process has four steps:

1. We assign a developer and a reviewer for each story
2. The developer solves the story often in a new branch
3. Then he asks the reviewer for a merge review
4. The reviewer determines whether the work meets the story requirements and the DoD
    - if not, he asks the developer to continue working on it
    - if yes, he merges the story branch to the sprint branch and the developer marks the story as *done*

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Collaboration

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When we work simultaneously on the same documents we use Floobits, ShareLaTeX, or Google Drive depending on the document.
Floobits is connected to a Git repo clone which facilitates when working with many files. It is particularly suitable for meeting notes, discussions, collaborative code level planning and code reviews.

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Motivation

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We have three main practices to maintain motivation:

- Regular review of the *six tactics*
- Regular review of our *team spirit recap*
- Regular discussion on problems (retrospectives)

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Motivation

Six tactics

1. Create common goals
2. Focus on facts
3. Develop multiple alternatives
4. Maintain a balanced power structure
5. Seek consensus with qualification
6. Use humour

Eisenhardt K M, Kahwajy J L, and Bourgeois III L J (1997) How Management Teams Can Have a Good

Fight, Harvard Business Review, Vol. 4, pp. 77-85.

Motivation
Team spirit recap

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Mission: Why we exist

- ▶ Create useful software for Pyry (and others)
- ▶ We are doing this project to learn (software development, requirements engineering, architecture, project management, quality assurance, Scrum, communication with client)
- ▶ We want grade five and the quality award

Motivation

Team spirit recap

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Values: What we believe in and how we will behave

- ▶ Superior quality
- ▶ Self-development
- ▶ Respect
- ▶ Achievement

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Motivation
Team spirit recap

Vision: What we want to be

- ▶ We want to see ourselves as the best of the course teams
- ▶ We want to win the quality award!
- ▶ We want to get grade 5+.
- ▶ We want to get an awesome reference (GitHub repo) that we can market on our future job applications.
- ▶ We want our tool to serve people in such a way that a community of users develops around it and continues it's development. We want to launch a successful opensource project, which we can speak proudly of even years from now.

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- Objective: Ace the course and develop a very useful and popular tool
- Scope: See product vision
- Advantage: We have high motivation, we meet in person every week, we have an active and responsible Scrum Master

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