CCG - Dojo on Artificial Intelligence

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Mittwoch, 16. Januar 13
Coding Dojo

"Place of the way"

Acquiring coding skills should be a continuous process
Coding Dojo

Non-competitive, collaborative, 
FUN environment

All skill levels are welcome
Artificial Intelligence

In the lab

Where we want to be

Working implementations

Correct, clean and practical code
Implementation

Technicalities DO matter!!
Test Driven

Make it reliable
Data Driven

Make it real
Modular

Make it usable
## Dojo - Overview

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 Min</td>
<td>Explain Problem</td>
</tr>
<tr>
<td>40 Min</td>
<td>Coding</td>
</tr>
<tr>
<td>10 Min</td>
<td>Break</td>
</tr>
<tr>
<td>40 Min</td>
<td>Coding</td>
</tr>
<tr>
<td>20 Min</td>
<td>Reflection</td>
</tr>
</tbody>
</table>

Learning by Doing

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Dojo - Problems

Someone brings a small problem he solved already including data
Dojo - Roles

- **Sensei**: Brings the problem and acts as a guide
- **Coder 1**: Writes codes
- **Coder 2**: Watches coder one and gives advice
- **The rest**: Discusses and gives constructive ideas
What do we learn

• **Sensei:** *Pitching idea*
• **Coder 1:** *Coding + Pair Programming*
• **Coder 2:** *Pair Programming*
Dojo - Setup

Beamer

Sensei

Computer

C1

C2

X

X

X

X

X

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Dojo - Rules

• The sensei does not code but advises!
• All skill levels are welcome
• After every 10 min code 1, 2 are switched.
• Everyone has to code once
• All code can be changed by programmers
Dojo - Kata

Or better stuff from your own research!
Dojo - Infrastructure

- Java
- JUnit
- Apache Commons
- Eclipse
Expectation
Maximization

\[ p(i) \]

\[ p(l) \]

\[ p(i) \]

\[ p(k) \]

\( \mu = 0, \sigma^2 = 0.2 \)
\( \mu = 0, \sigma^2 = 1.0 \)
\( \mu = 0, \sigma^2 = 5.0 \)
\( \mu = -2, \sigma = 0.5 \)