

DECISION-MAKING FOR DEVELOPERS

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Should an AI make decisions for a developer?



It depends.



35,000





When you been zoned out for 10 minutes on the highway and you're somehow still alive



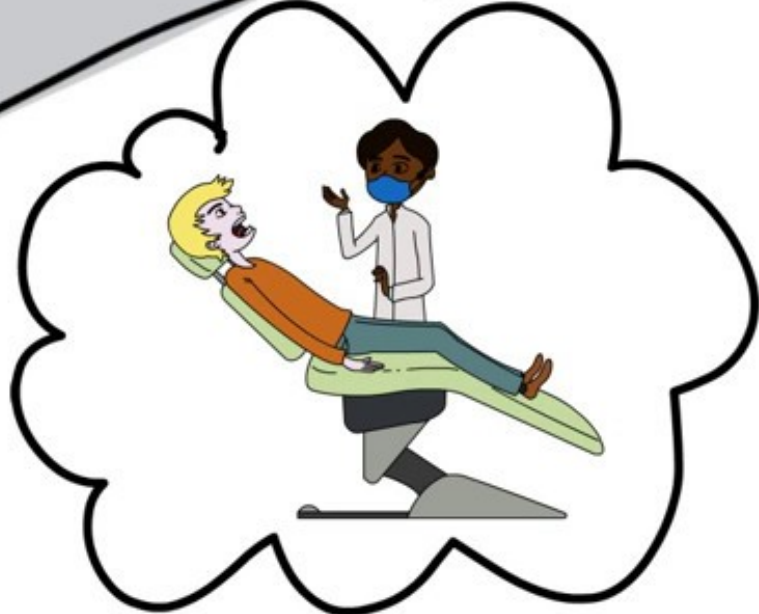
HIGHWAY HYPNOSIS



SLOW DOWN



But... how...?



BEGINNER VS EXPERIENCED





THINKING,
FAST AND SLOW



DANIEL
KAHNEMAN

System 1



Fast, intuitive and
emotional

System 2

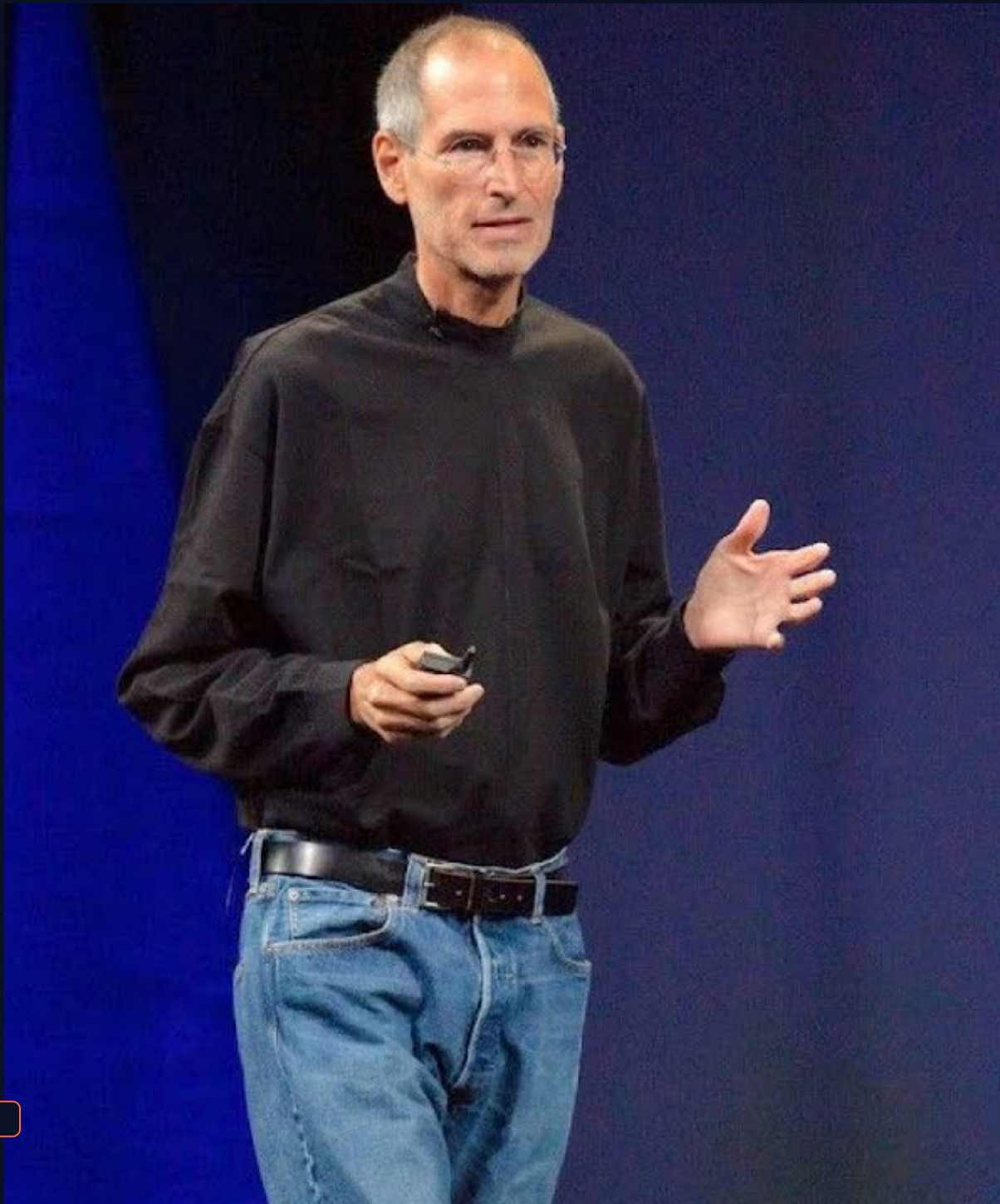


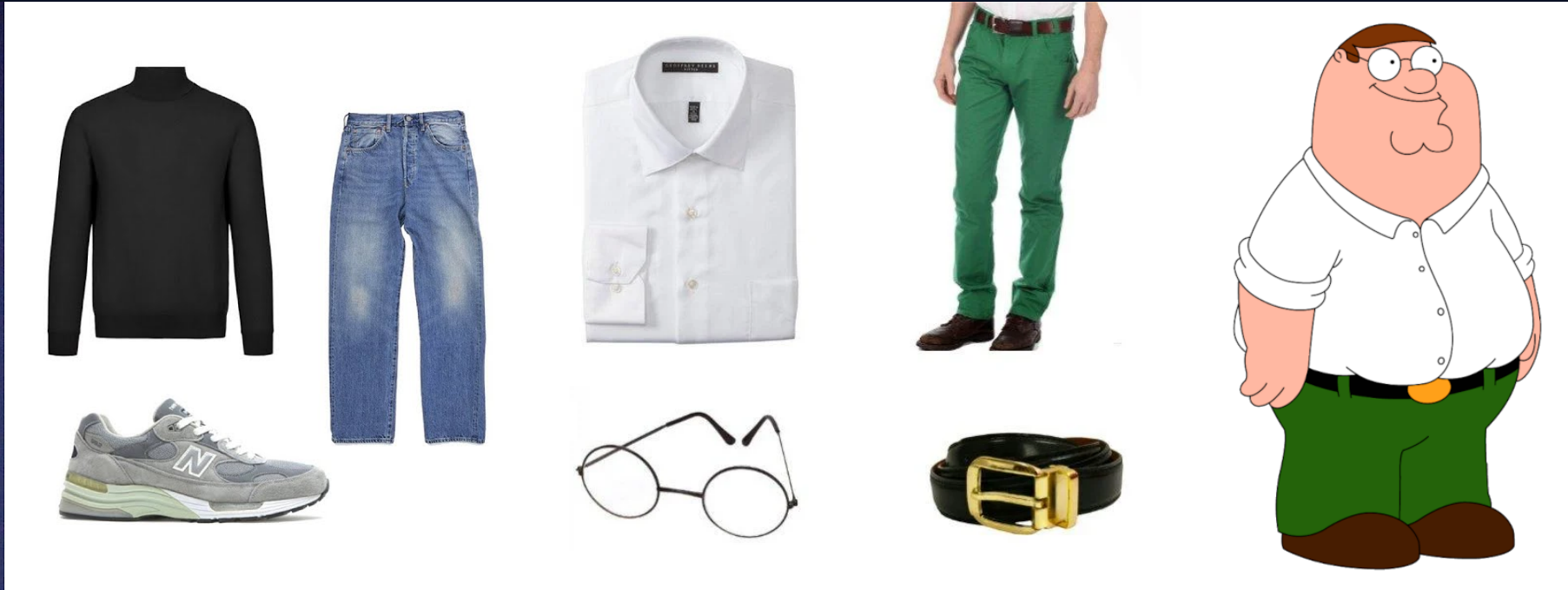
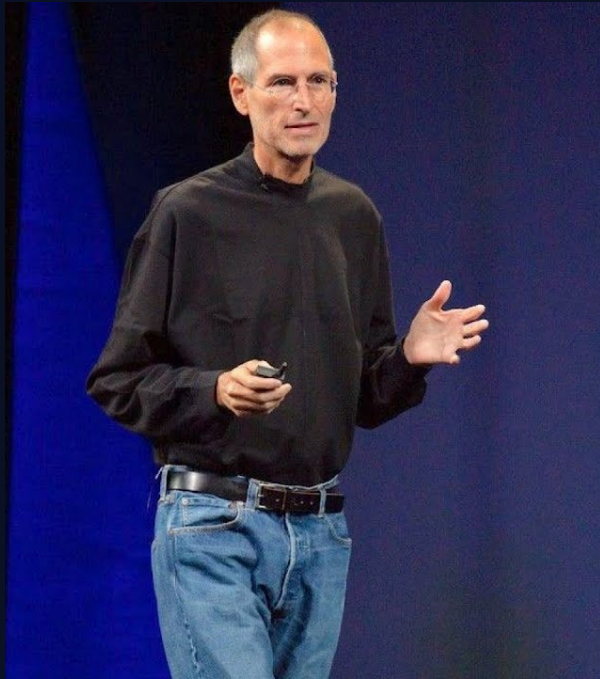
Slow, conscious
and effortful



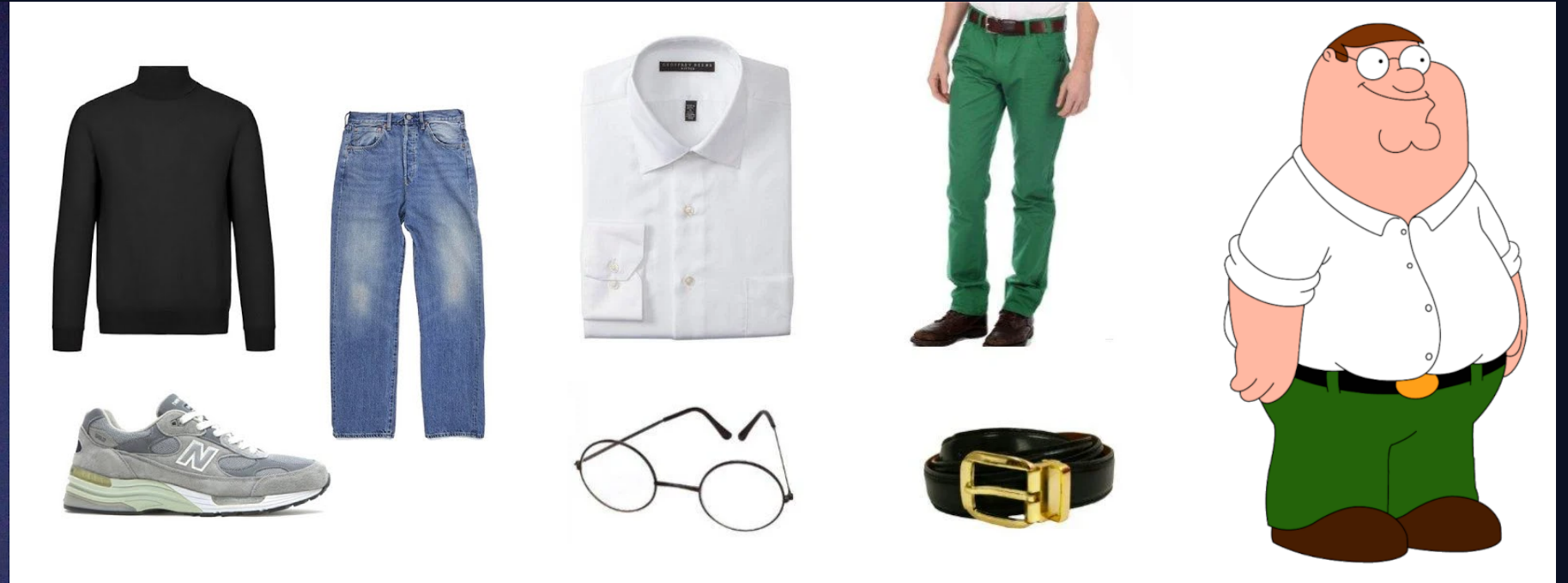
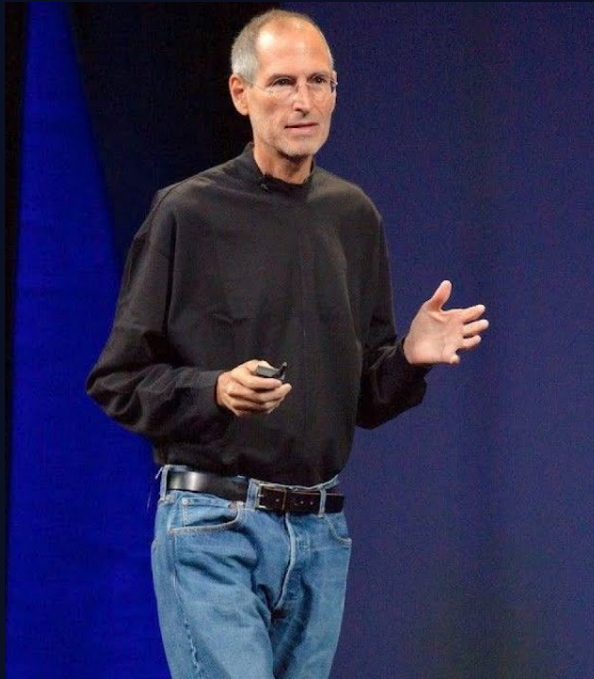
STANDARDS







DECISION FATIGUE



GOOD DECISION
VS
BAD DECISION



CODING FOR CHANGE

- Design patterns
- Hexagonal Architecture
- Rector



DECISION-MAKING TECHNIQUES



7 STEPS TO EFFECTIVE DECISION-MAKING



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1. Identify the decision



7 STEPS TO EFFECTIVE DECISION-MAKING

1. Identify the decision
2. Gather relevant information



7 STEPS TO EFFECTIVE DECISION-MAKING

1. Identify the decision
2. Gather relevant information
3. Identify the alternatives



7 STEPS TO EFFECTIVE DECISION-MAKING

1. Identify the decision
2. Gather relevant information
3. Identify the alternatives
4. Weigh the evidence



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5. Choose among alternatives



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7 STEPS TO EFFECTIVE DECISION-MAKING

1. Identify the decision
2. Gather relevant information
3. Identify the alternatives
4. Weigh the evidence
5. Choose among alternatives
6. Take action
7. Review your decision & its consequences



PRE-MORTEM

“Before a formal decision is made: imagine we are a year into the future. We implemented the plan as it now exists. The outcome was a disaster. Please take 5 to 10 minutes to write a brief history of that disaster.”

– Gary Klein



DECISION-MAKING WITHIN A TEAM



DECISION-MAKING FRAMEWORK



DECISION-MAKING FRAMEWORK



DECISION-MAKING FRAMEWORK

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2. Give them sudo rights



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3. A decision is easier made with 3 developers than with 2



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4. As a lead; involve others into the decision to create support



DECISION-MAKING FRAMEWORK

1. Decide who is responsible for the final decision (usually the lead)
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4. As a lead; involve others into the decision to create support
5. Create a shared technical vision and reiterate it often



It's a lead developer's job not to decide, but to facilitate the decision.



“It's a lead developer's job not to decide, but to facilitate the decision.”

- Me



DOCUMENTING DECISIONS



ADR

```
# Decision record template by Michael Nygard
```

```
This is the template in [Documenting architecture decisions - Michael Nygard] (http://th
```

```
You can use [adr-tools] (https://github.com/npryce/adr-tools) for managing the ADR files
```

```
In each ADR file, write these sections:
```

```
# Title
```

```
## Status
```

```
What is the status, such as proposed, accepted, rejected, deprecated, superseded, etc.?
```

```
## Context
```

<https://adr.github.io/>



DECISION-MAKING FRAMEWORK

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DECISION-MAKING FRAMEWORK

1. Decide who is responsible for the final decision (usually the lead)
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4. Create a shared technical vision and reiterate it often
5. Document your decisions using ADRs





CRUCIAL SKILLS



CRUCIAL SKILLS

- Time management



CRUCIAL SKILLS

- Time management
- Recognizing critical moments



TECHNICAL RETROSPECTIVES



PHPMETRICS



PhpMetrics

- Overview
- Violations (221)
- Composer
- Unit testing
- Size & volume
- Complexity & defects
- Object oriented metrics
- Object relations
- Coupling
- Package oriented metrics
- Package relations
- Git

Created at 2022-11-24 16:00:22 , with PHPMetrics v2.8.1 (Jean-François Lépine).

Violations (0 criticals, 71 errors)

221

[View details >](#)

Lines of code

47,788

[View details >](#)

Classes

1,039

[View details >](#)

Average cyclomatic complexity by class

4.44

[View details >](#)

Assertions in tests

398

[View details >](#)

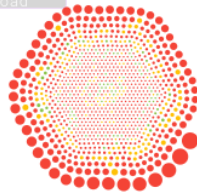
Average bugs by class

0.07

[View details >](#)

Maintainability / complexity (with comments)

download



Each file is symbolized by a circle. Size of the circle represents the Cyclomatic complexity. Color of the circle represents the Maintainability Index.

Large red circles will be probably hard to maintain.

ClassRank (Google's page rank applied to relations between classes)

Page Rank is a way to measure the importance of a class. There is no "good" or "bad" page rank. This metric reflects interactions in your code.

ClassRank

0.11	App\Domain\Core\ValueObject\AvailabilityLevel	50.18	50.18
0.01	App\Domain\Core\ValueObject\LocationCode	57.98	57.98
0	App\Domain\Content\Entity\Menu\MenuItem	75.54	42.46
0	App\Domain\Content\Entity\TermCondition\TermCondition	72.65	42.12
0	App\Domain\Content\Entity\Page\PageContent	72.15	41.62
0	App\Domain\Content\Entity\Page\ConnectedPageFile	72.41	40.72
0	App\Domain\Content\Entity\Page\Page	44.88	17.15
0	App\Domain\Content\Entity\Page\PageRouting	74.72	43.3
0	App\Domain\Content\Entity\Page\MetaData	72.24	41.71
0	App\Domain\Content\ValueObject\File	67.08	39.97

TAKEAWAYS



TAKEAWAYS

1. Experience, training your system 1, more space for system 2



TAKEAWAYS

1. Experience, training your system 1, more space for system 2
2. 7 steps to effective decision-making



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3. Create a decision-making framework within your team



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TAKEAWAYS

1. Experience, training your system 1, more space for system 2
2. 7 steps to effective decision-making
3. Create a decision-making framework within your team
4. Document your decisions using ADR
5. Analyse previously written code and get better at recognizing critical moments



THANK YOU

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wedevelop

stories that matter



