AI and the SDLC/DevOps Conundrum

Adam Englander

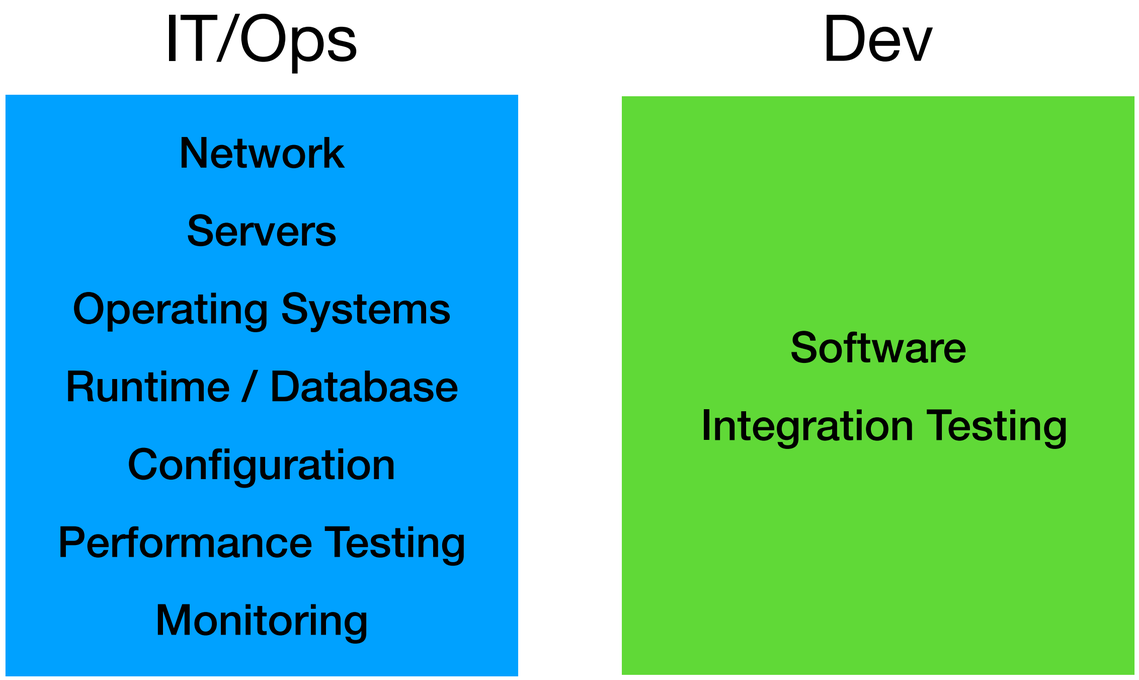
AI Is Coming!

It’s Going to be Your Problem!

The Conundrum

Shifting Responsibility

Shifting Ops Responsibility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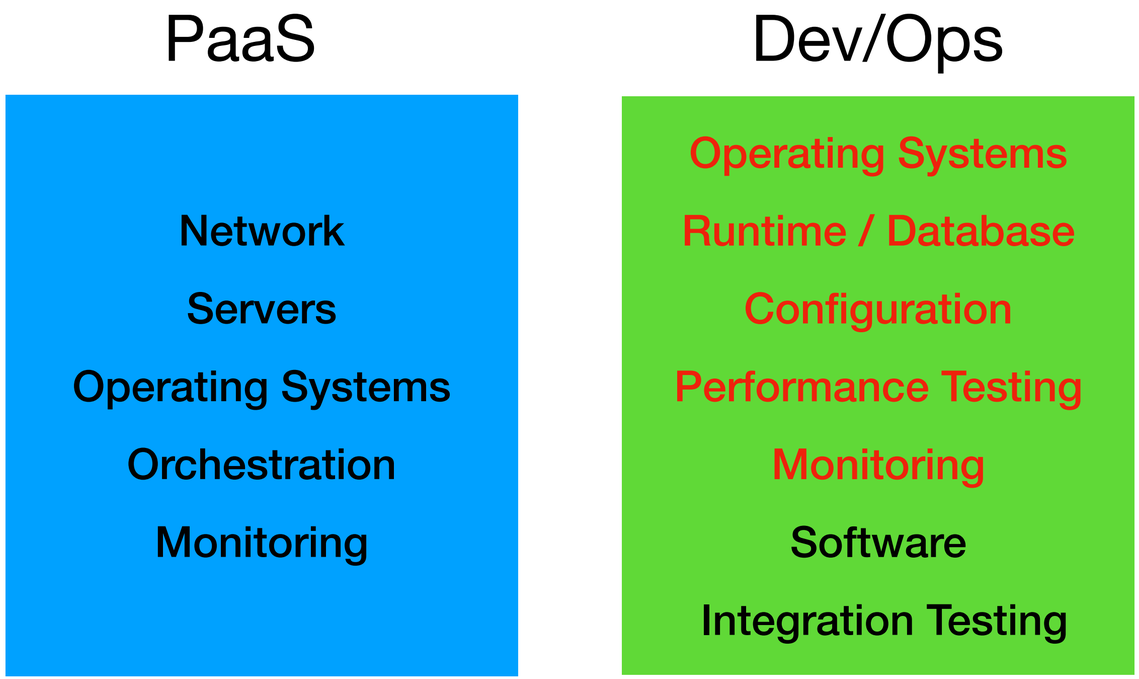
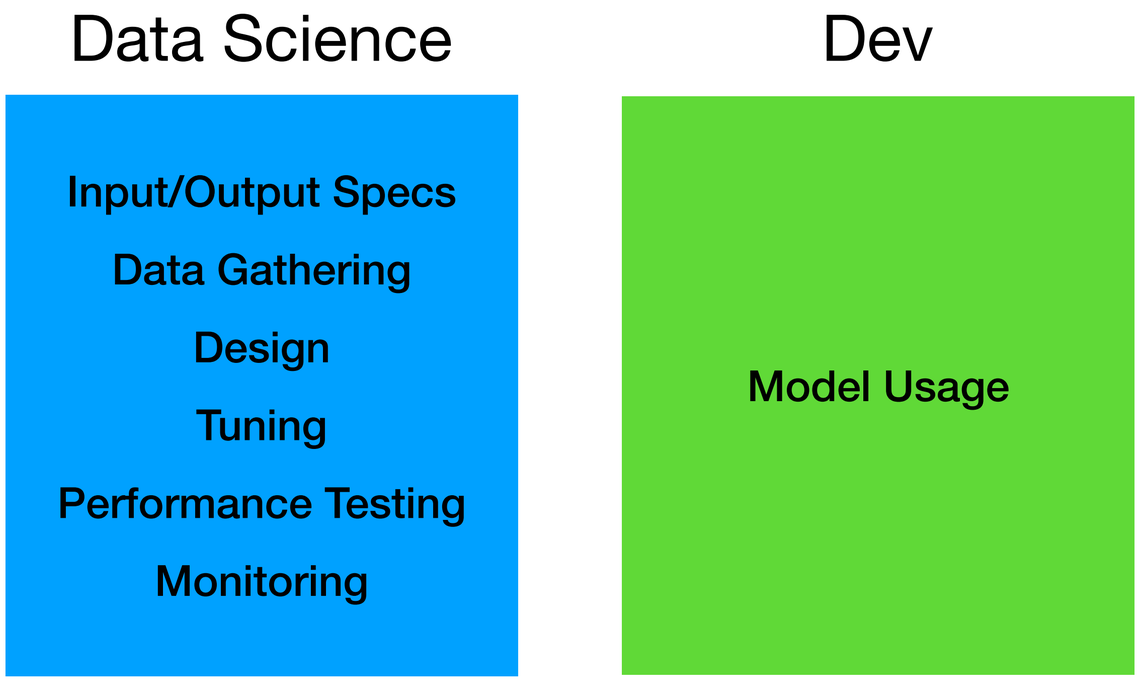
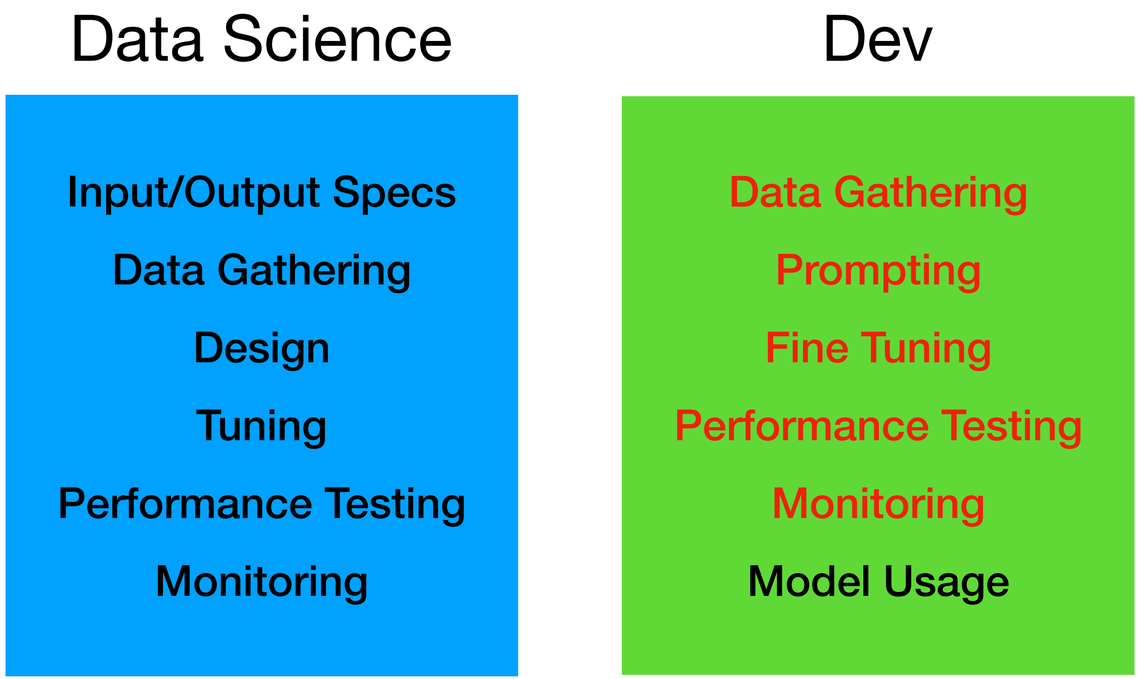
Network
Servers
Operating Systems
Runtime / Database
Configuration
Performance Testing
Monitoring
Dev
Software
Integration Testing

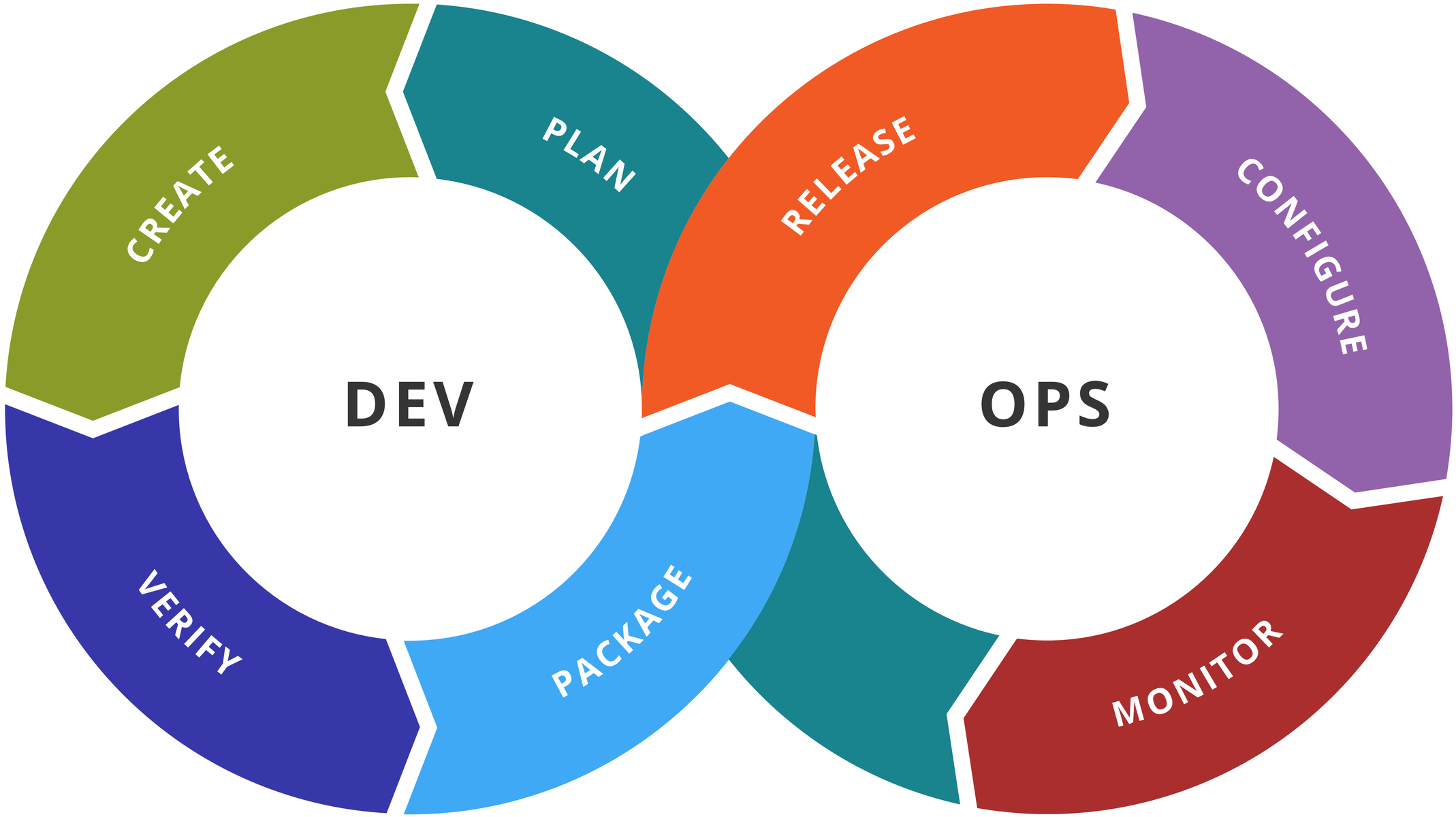

PaaS
Network
Servers
Operating Systems
Orchestration
Monitoring
Dev/Ops
Operating Systems
Runtime / Database
Configuration
Performance Testing
Monitoring
Software
Integration Testing

Shifting Data Science Responsibilities


Data Science
Input/Output Specs
Data Gathering
Design
Tuning
Performance Testing
Monitoring
Dev
Model Usage


Data Science
Input/Output Specs
Data Gathering
Design
Tuning
Performance Testing
Monitoring
Dev
Data Gathering
Prompting
Fine Tuning
Performance Testing
Monitoring
Model Usage

The Solution



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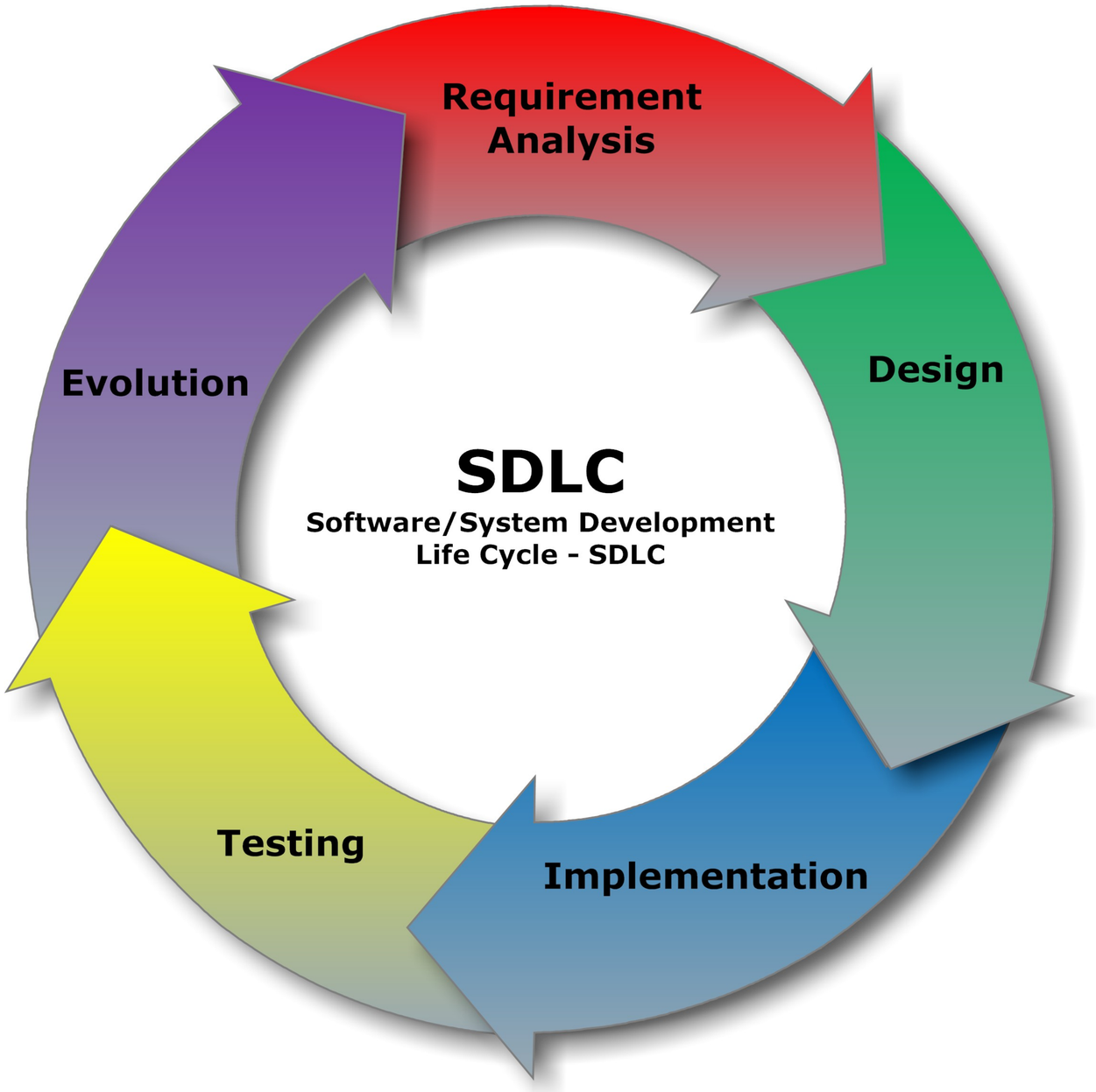

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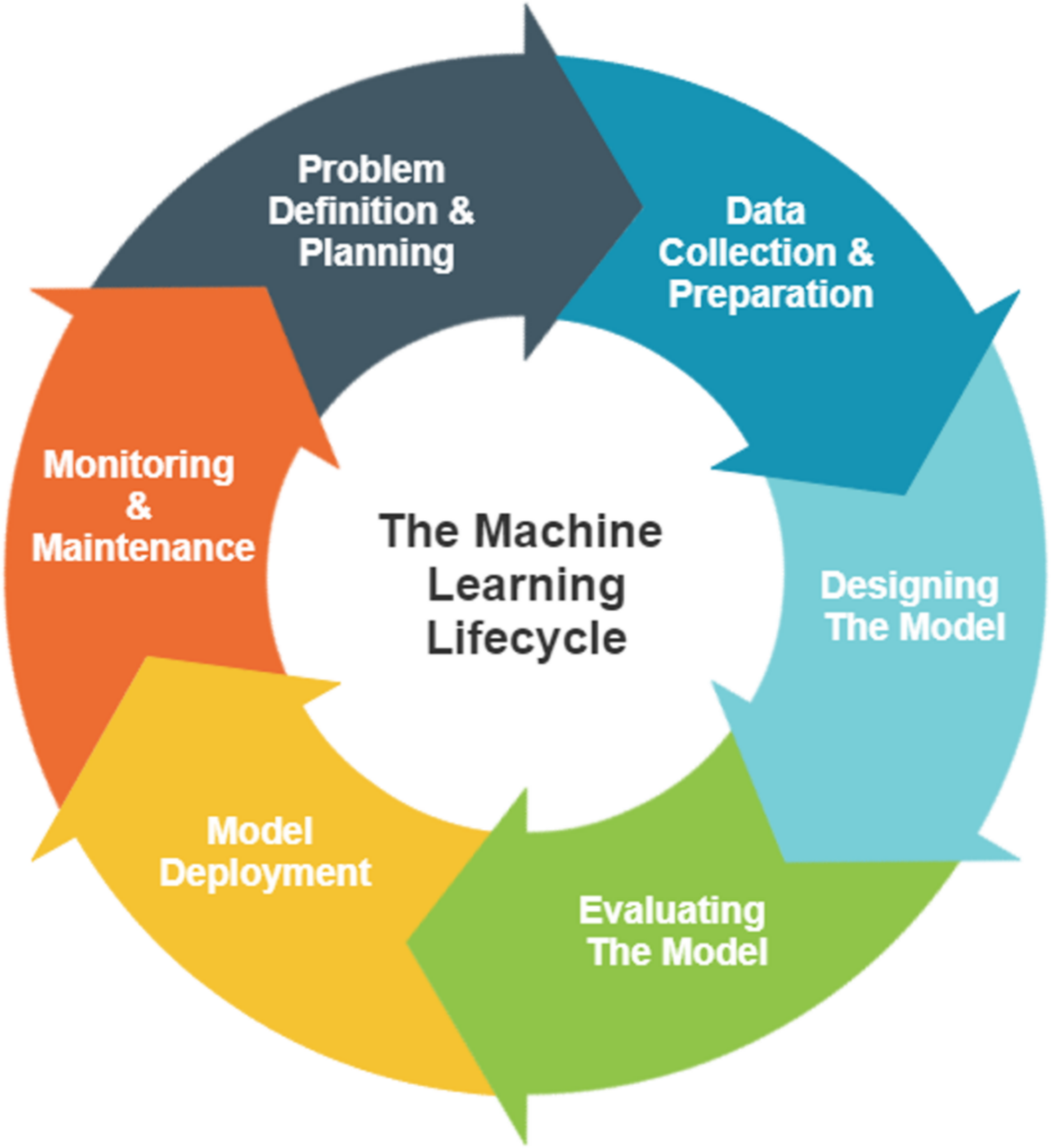

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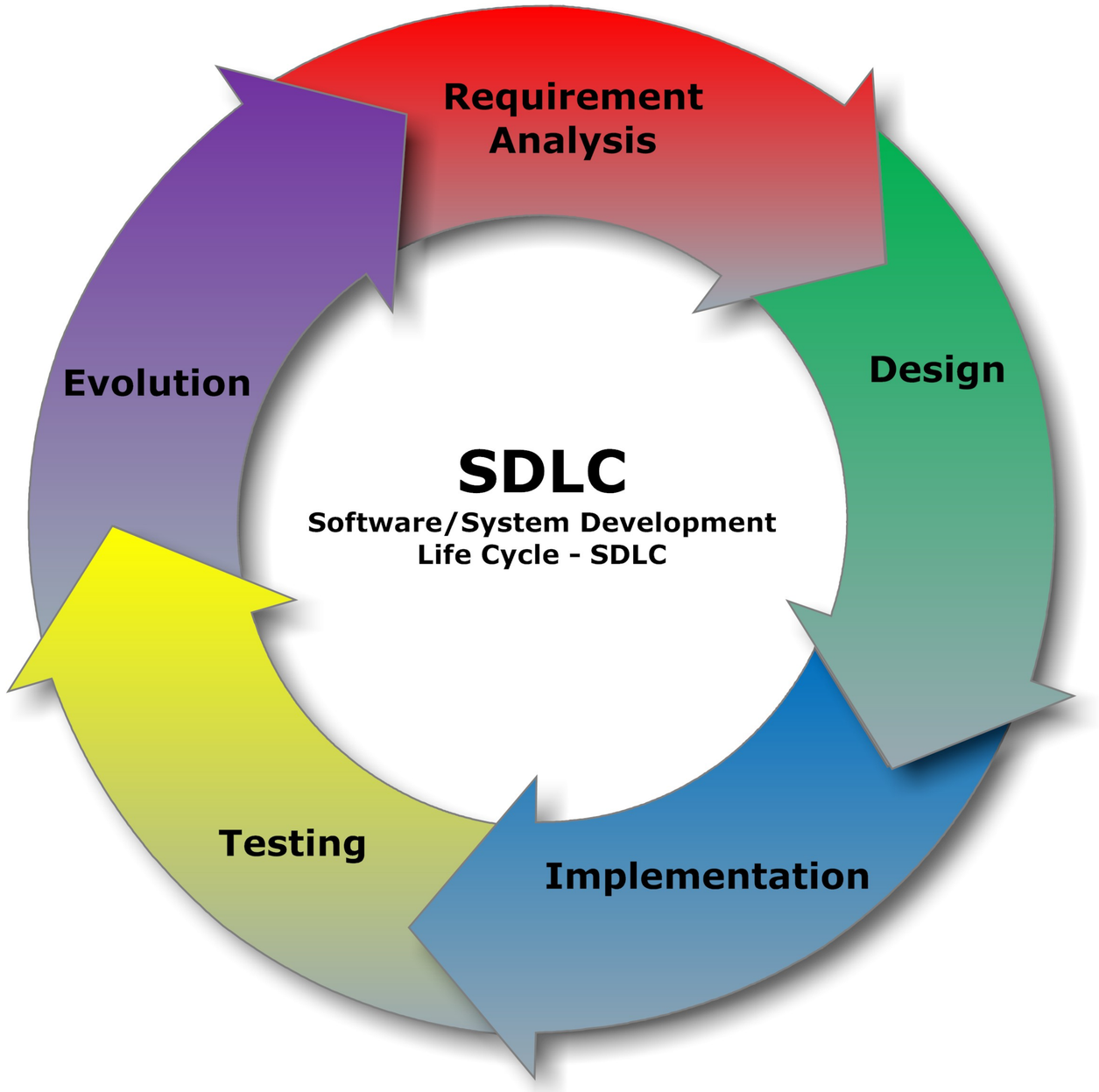

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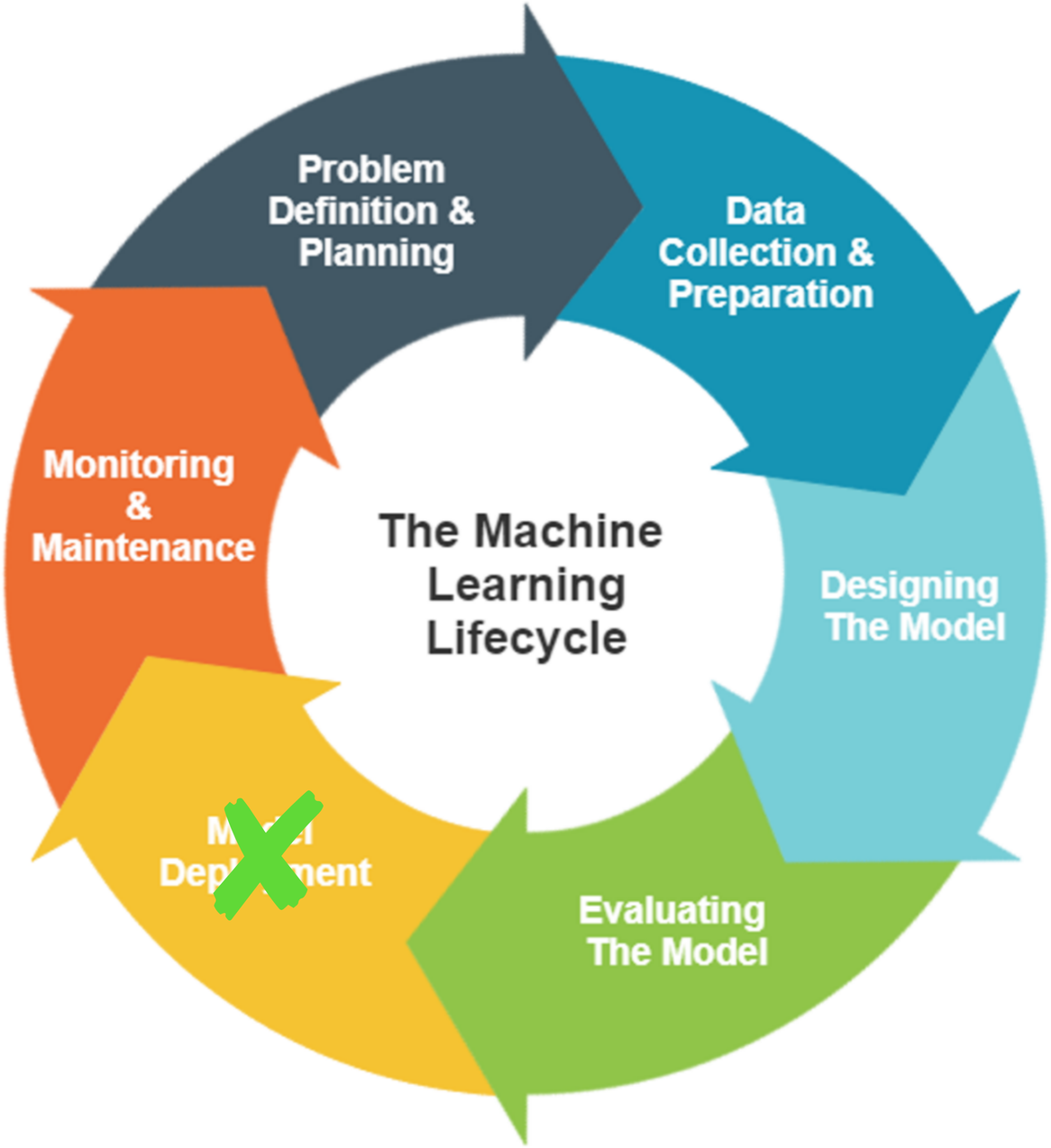

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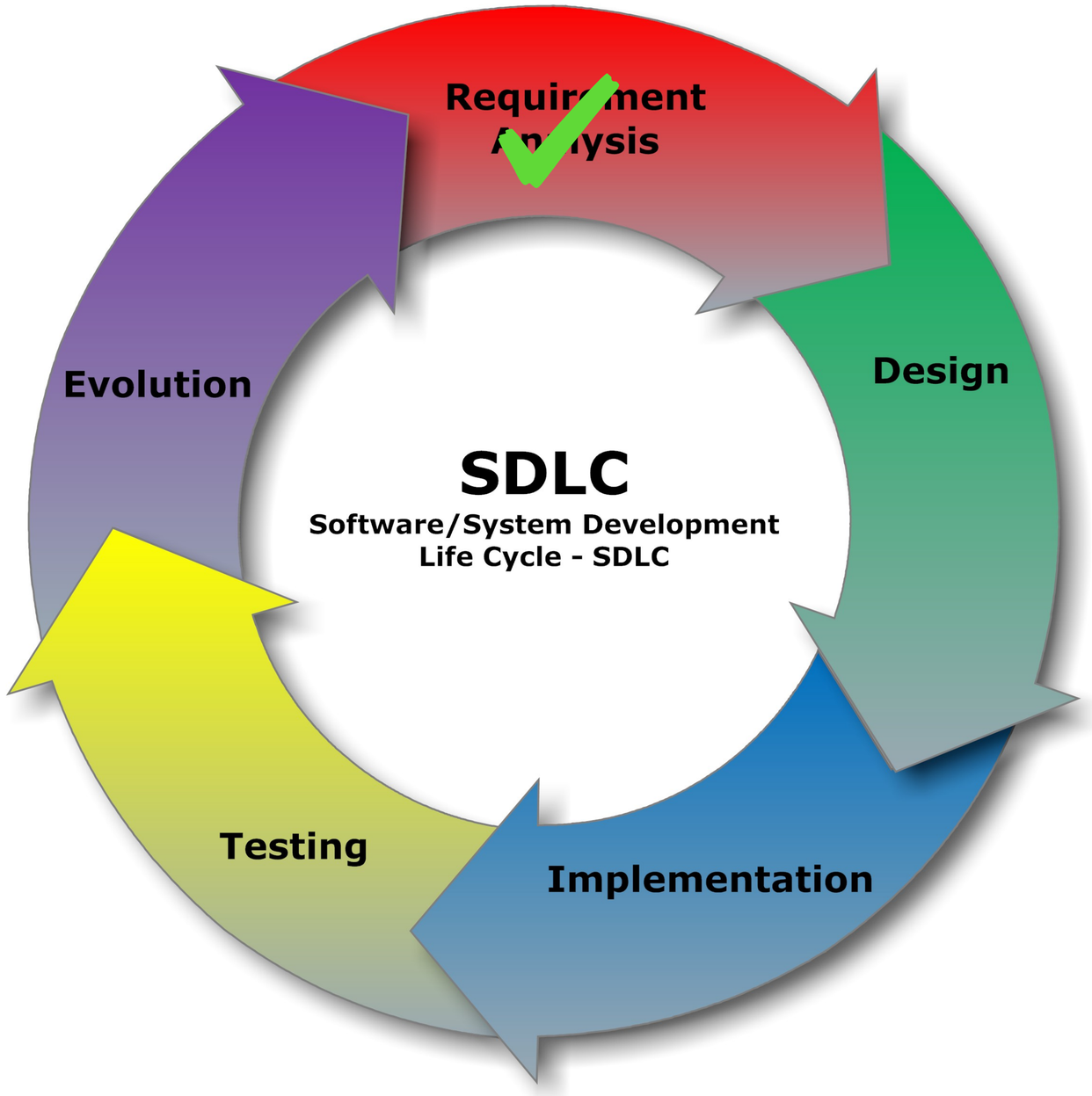

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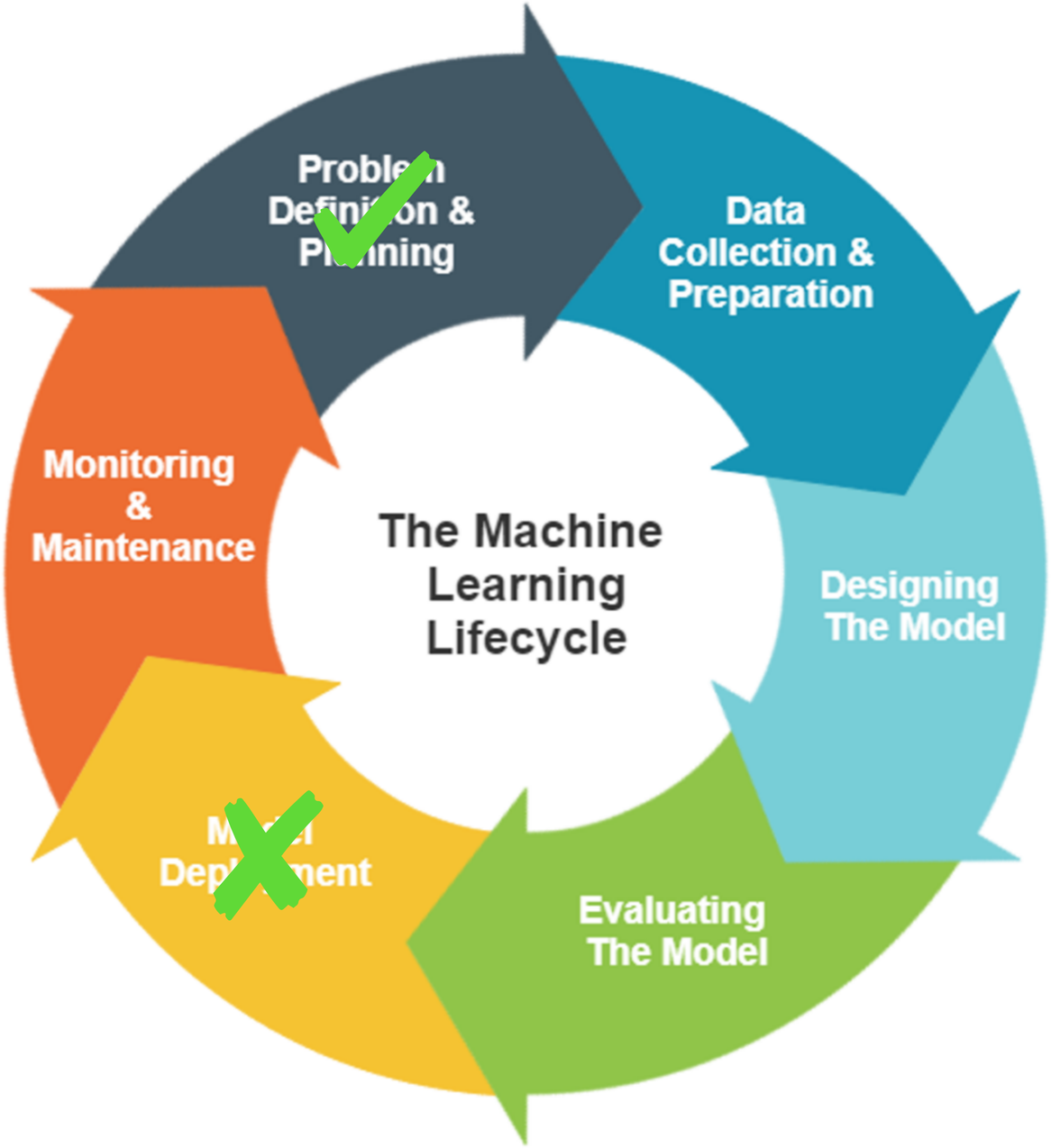

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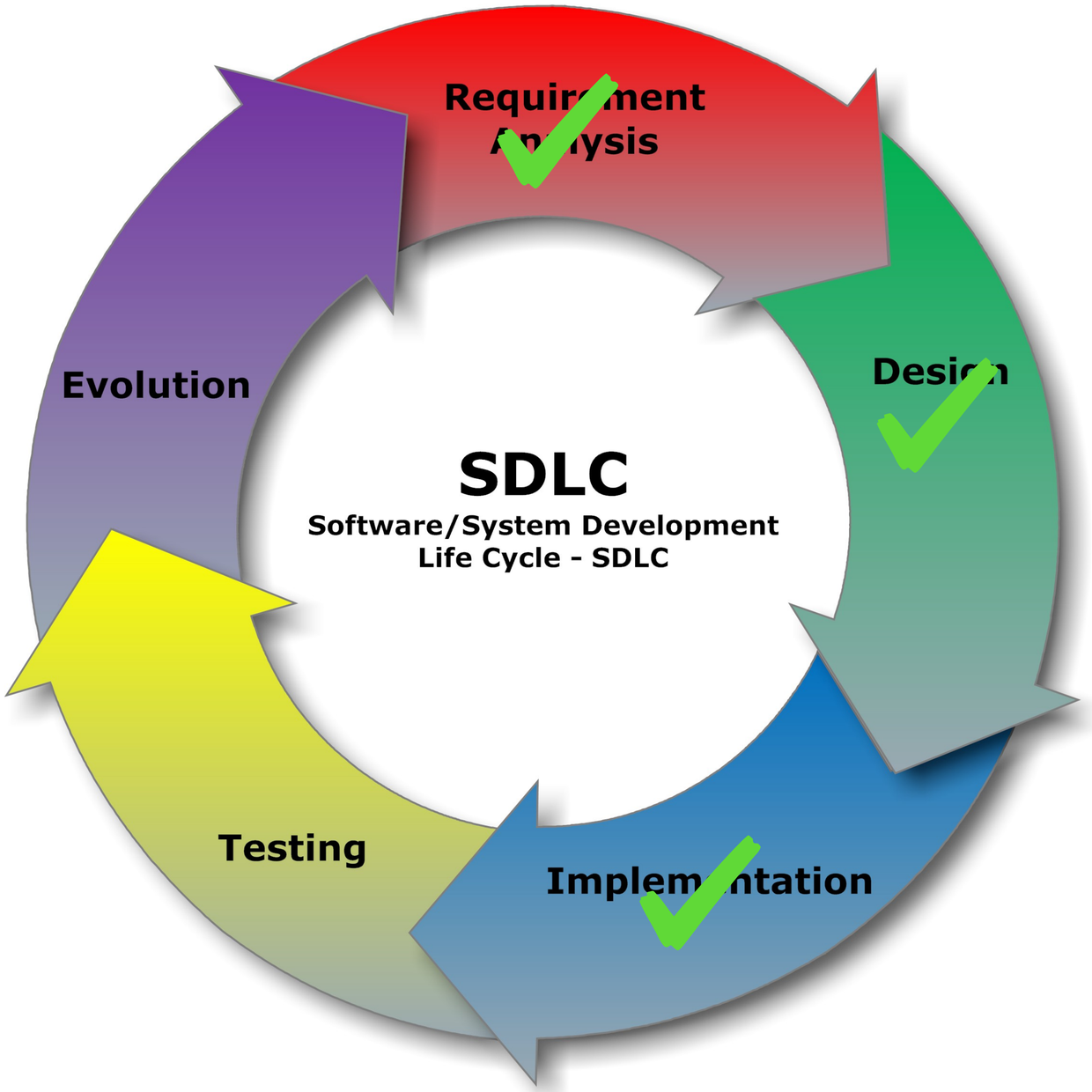

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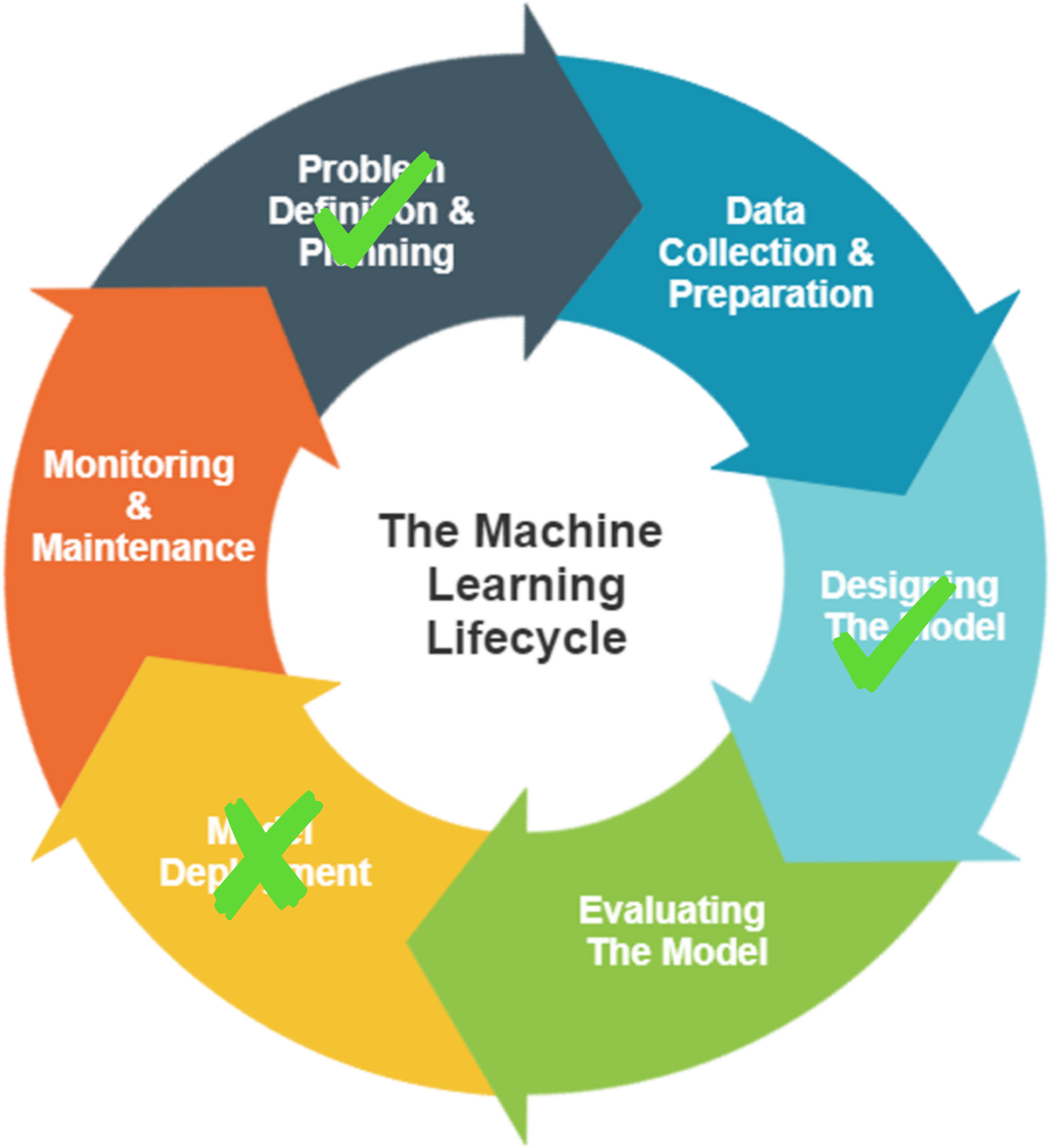

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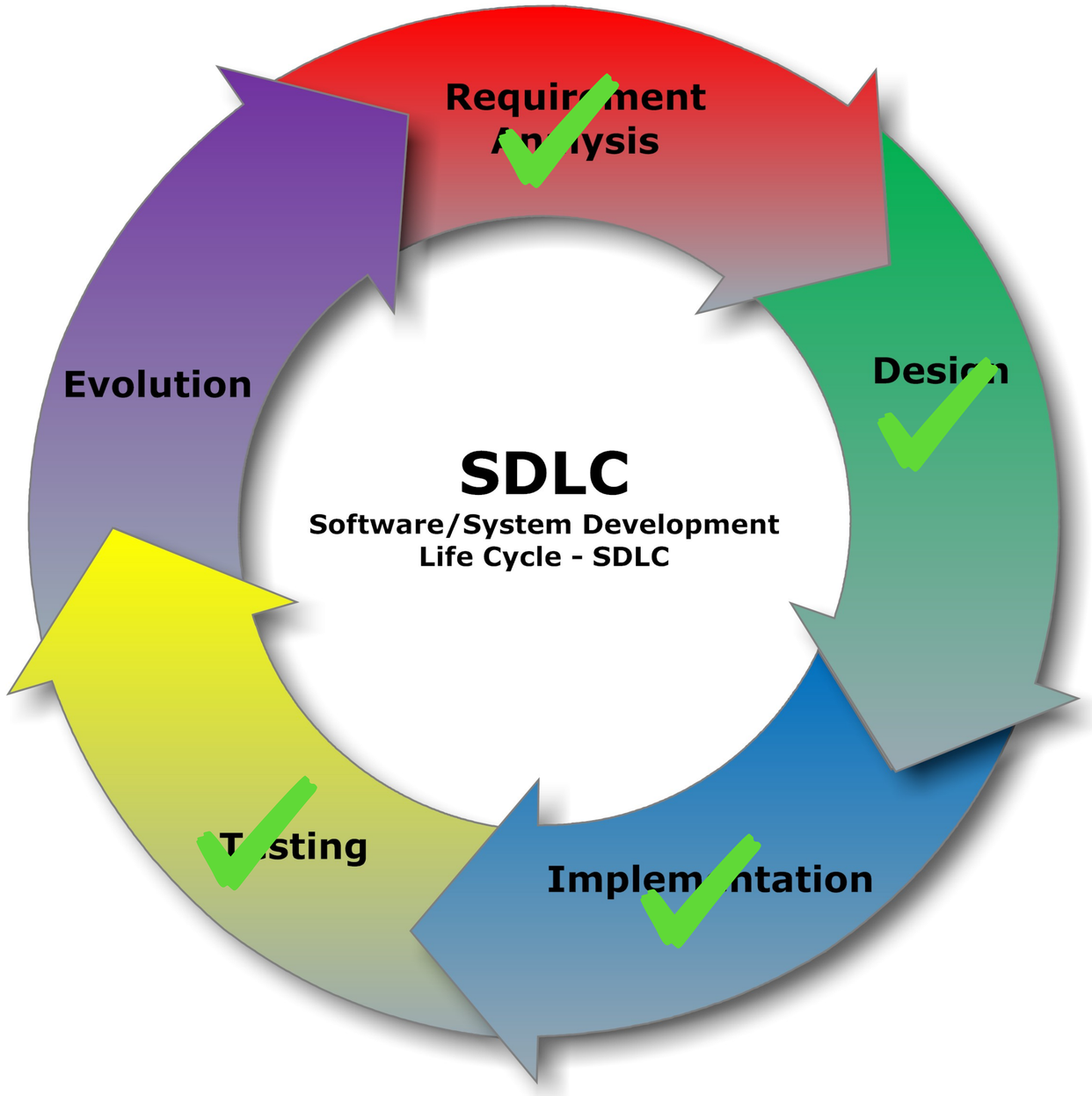

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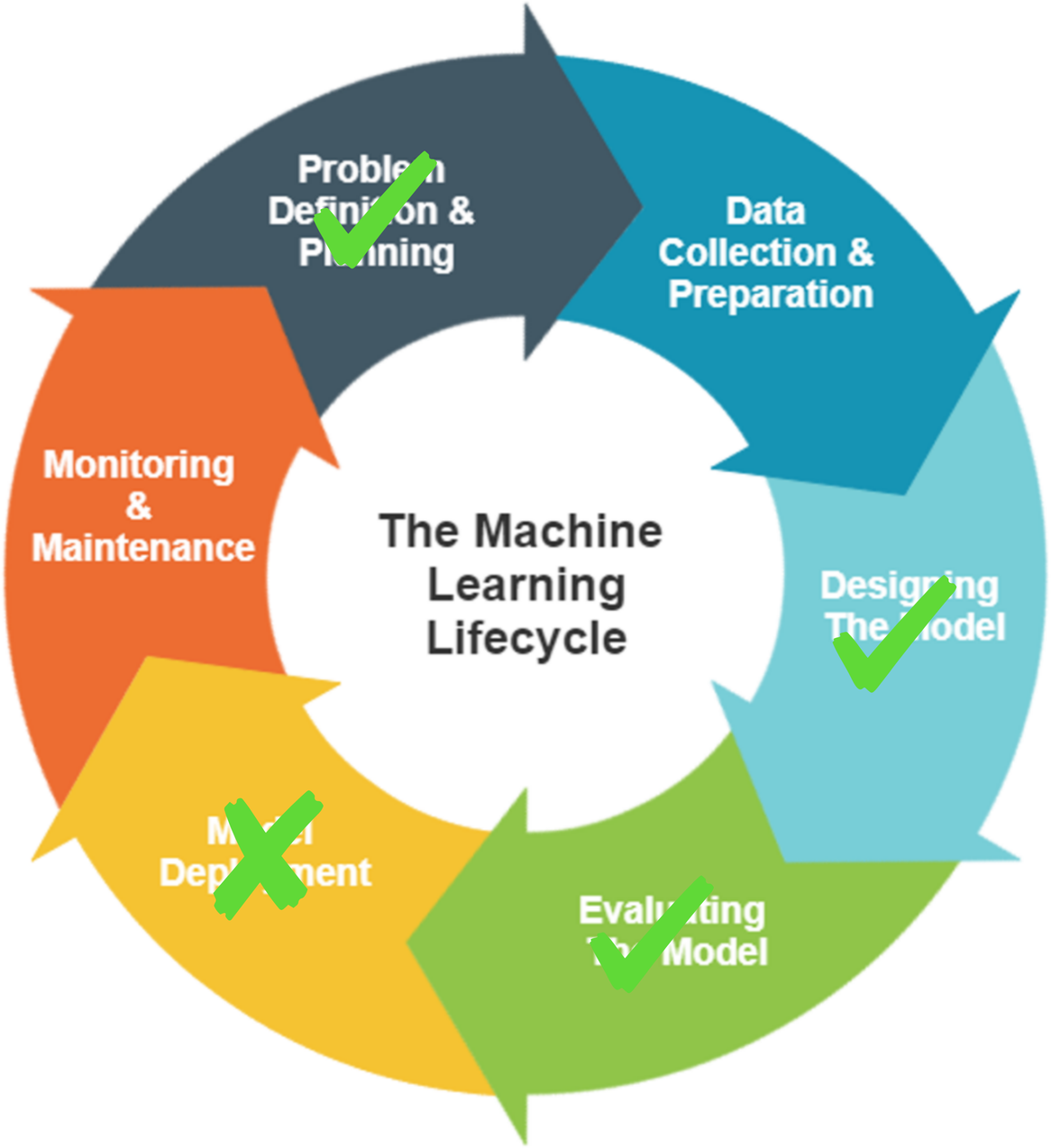

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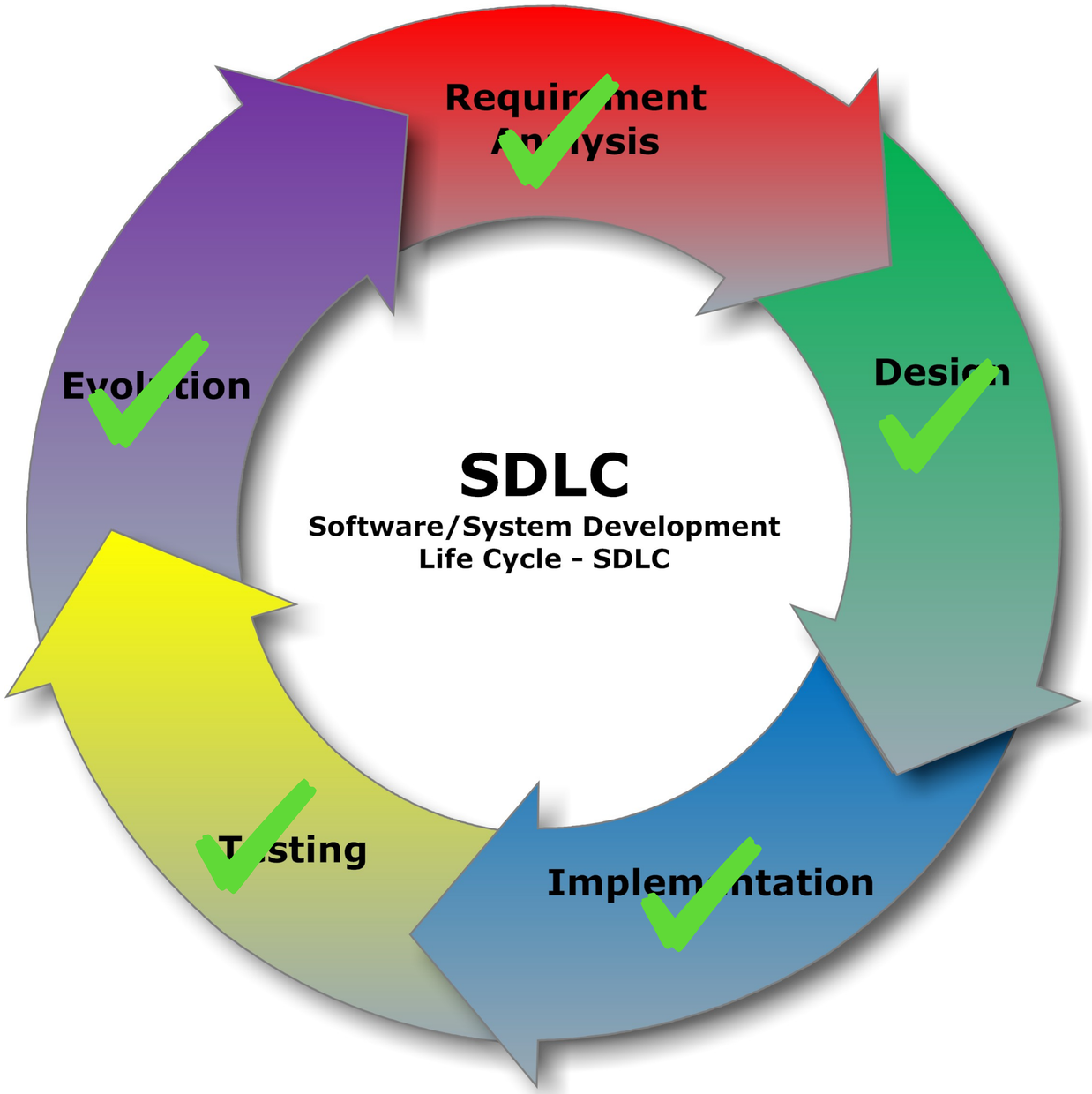

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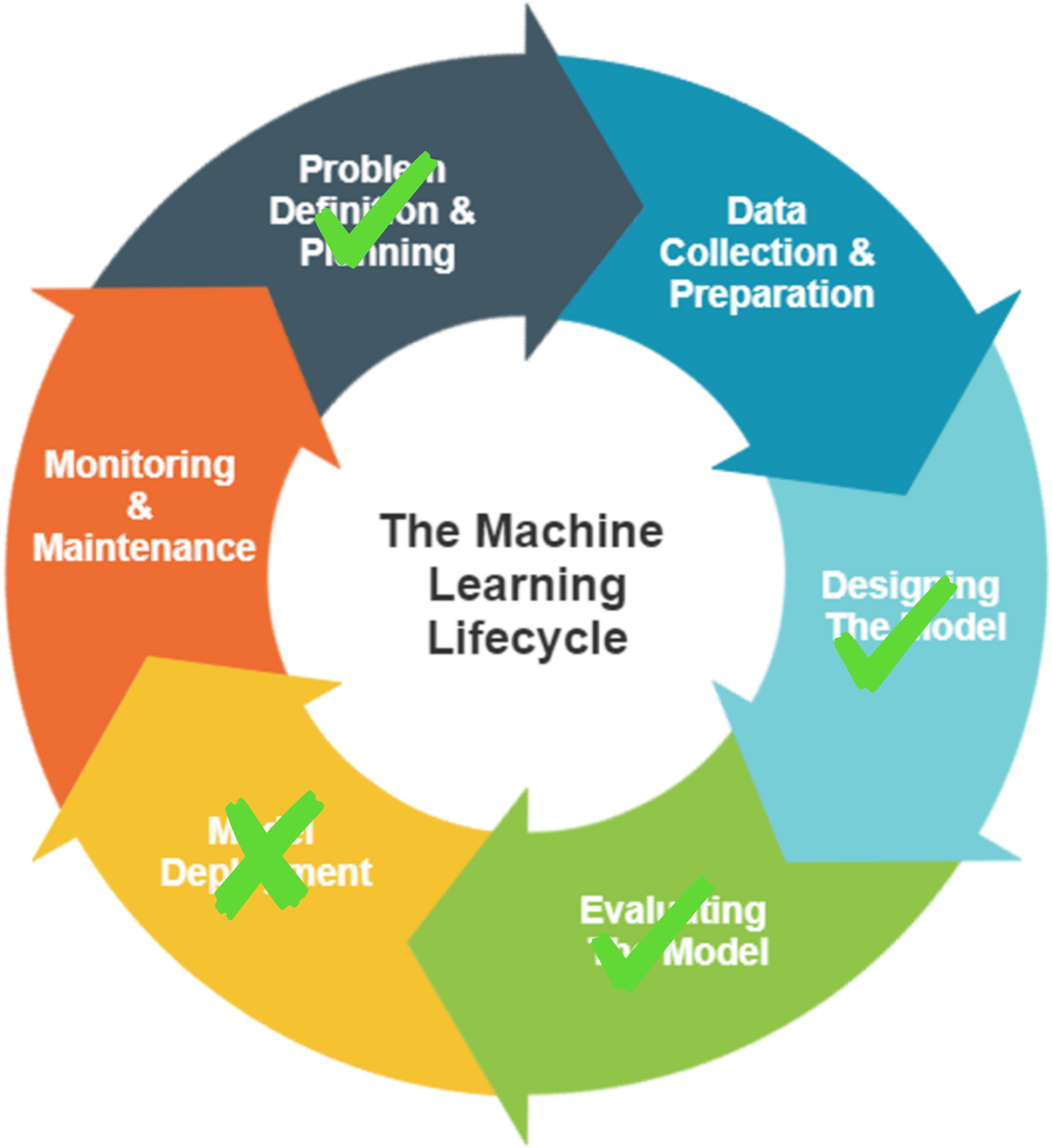

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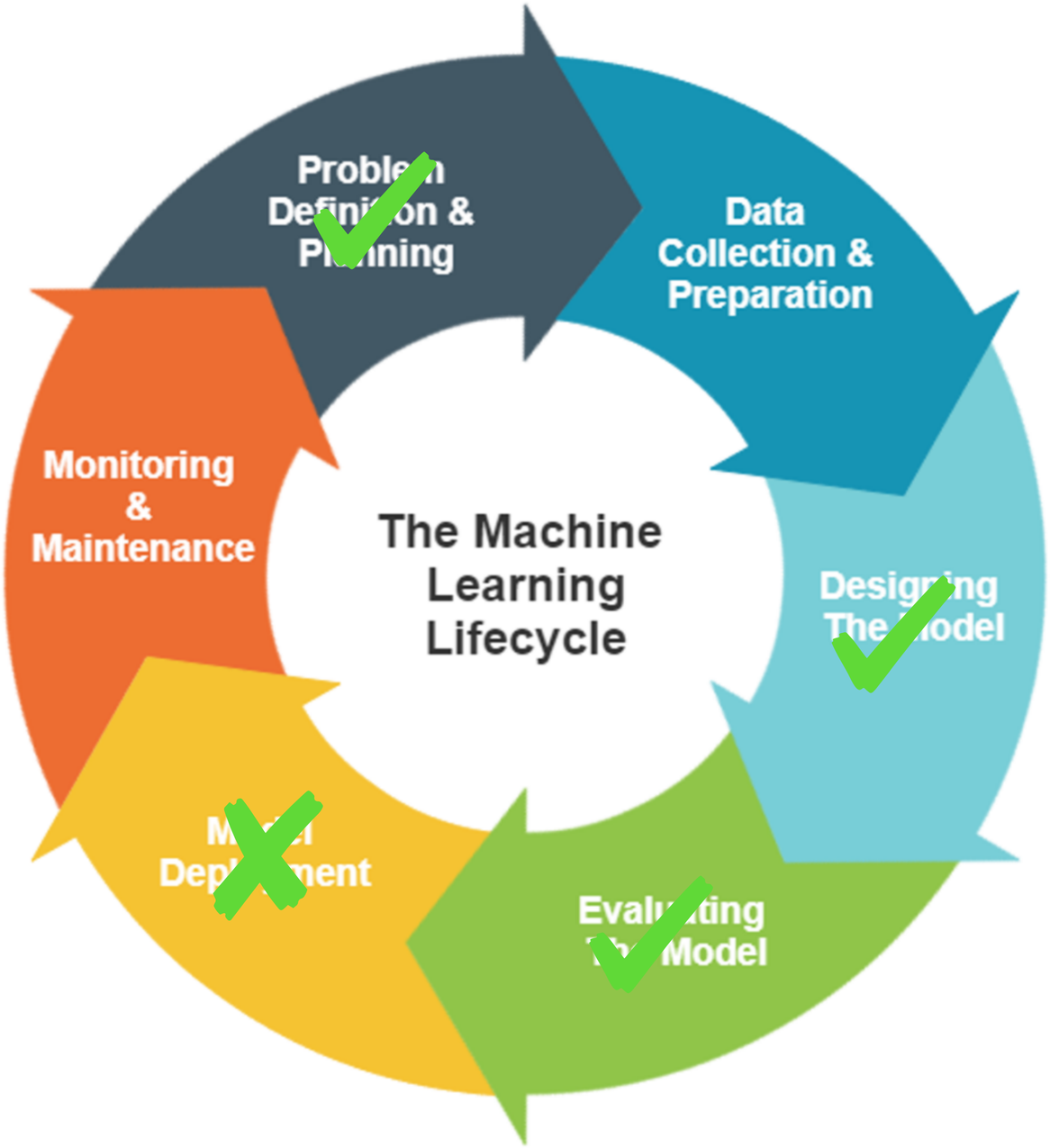
Bridging the Gap

- Data Gathering
- Prompting
- Performance Testing
- Monitoring
- Model Usage



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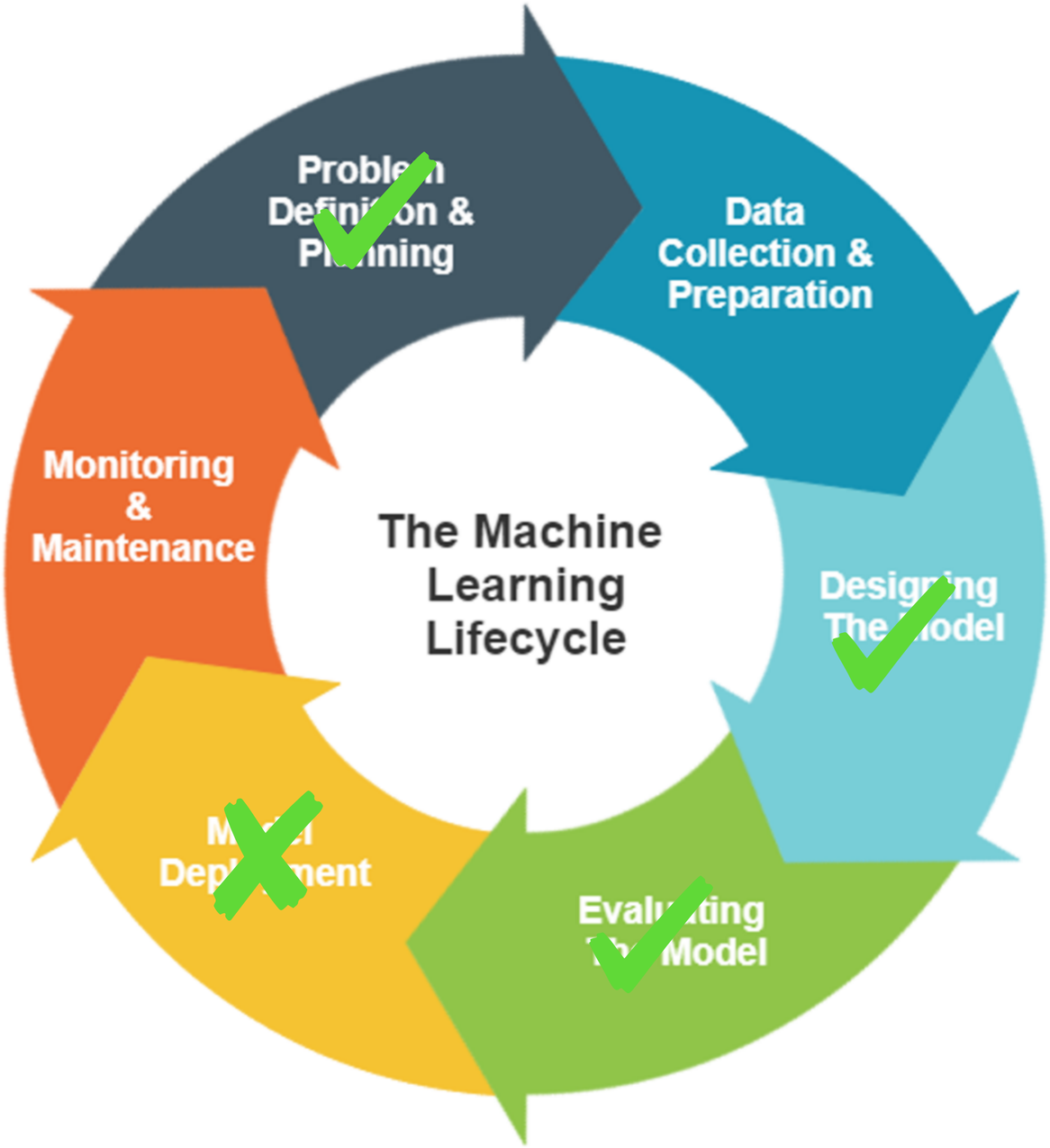

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Bridging the Gap

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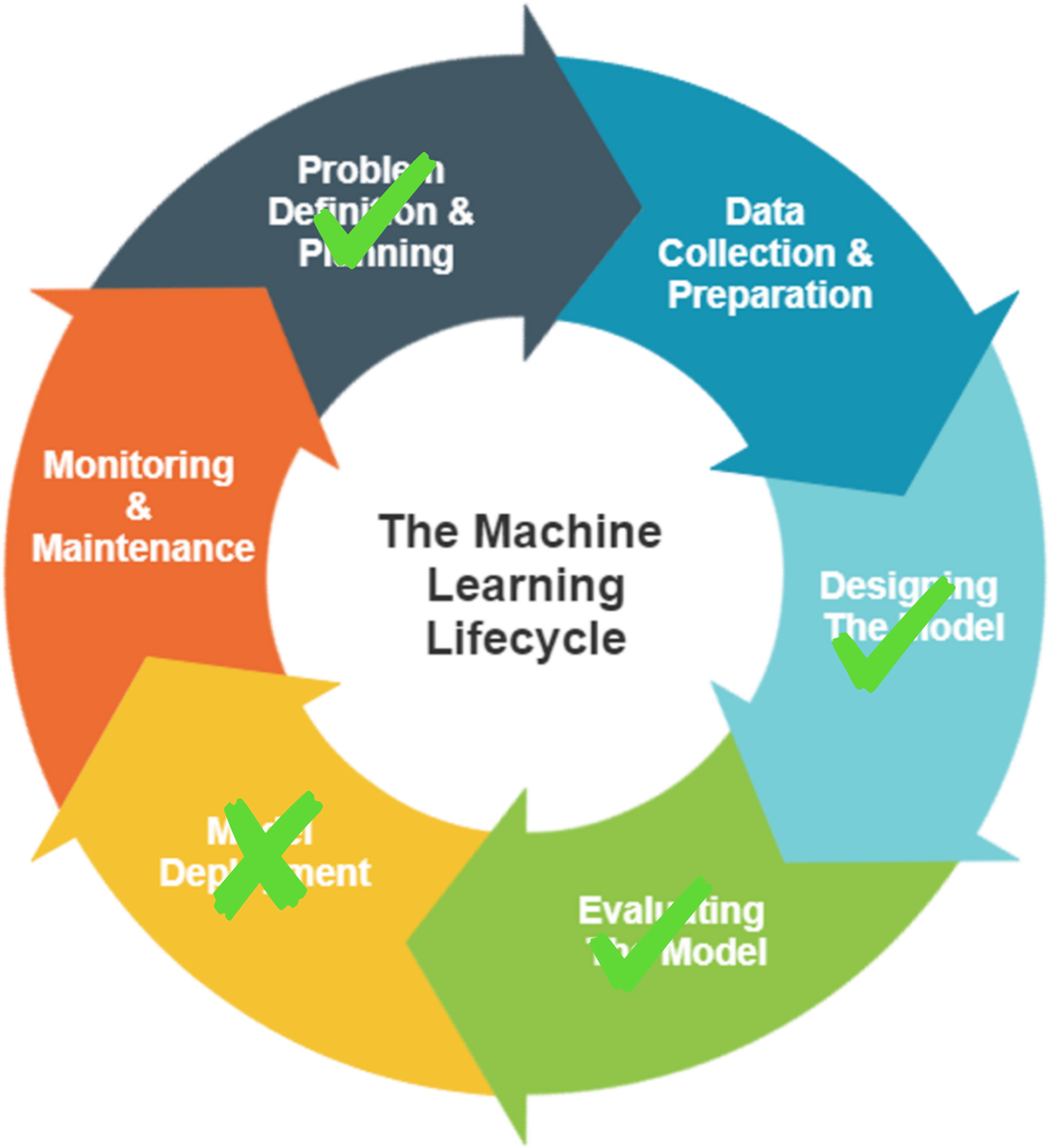
- ~~Prompting~~
- Performance Testing
- Monitoring
- ~~Model Usage~~



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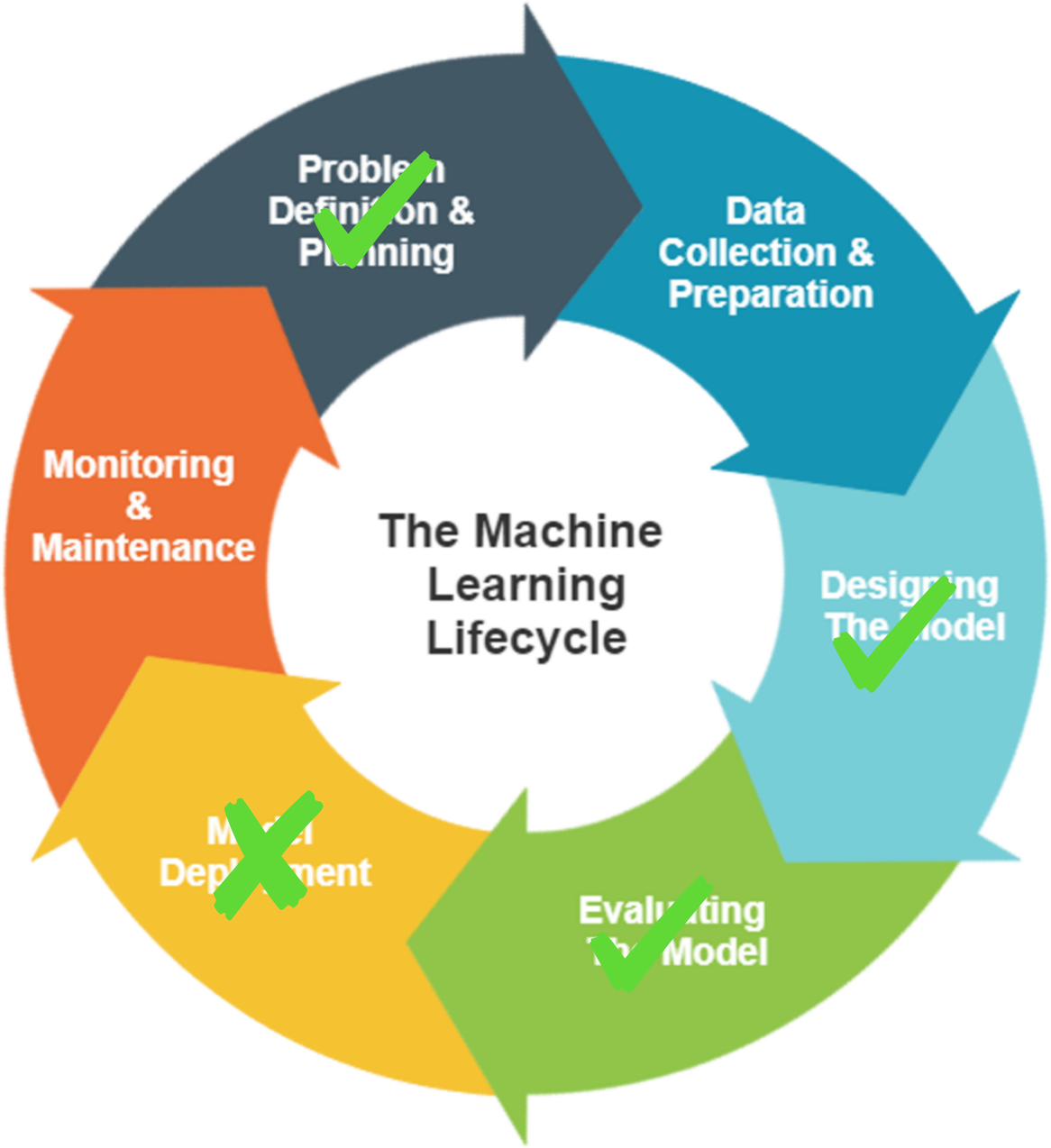

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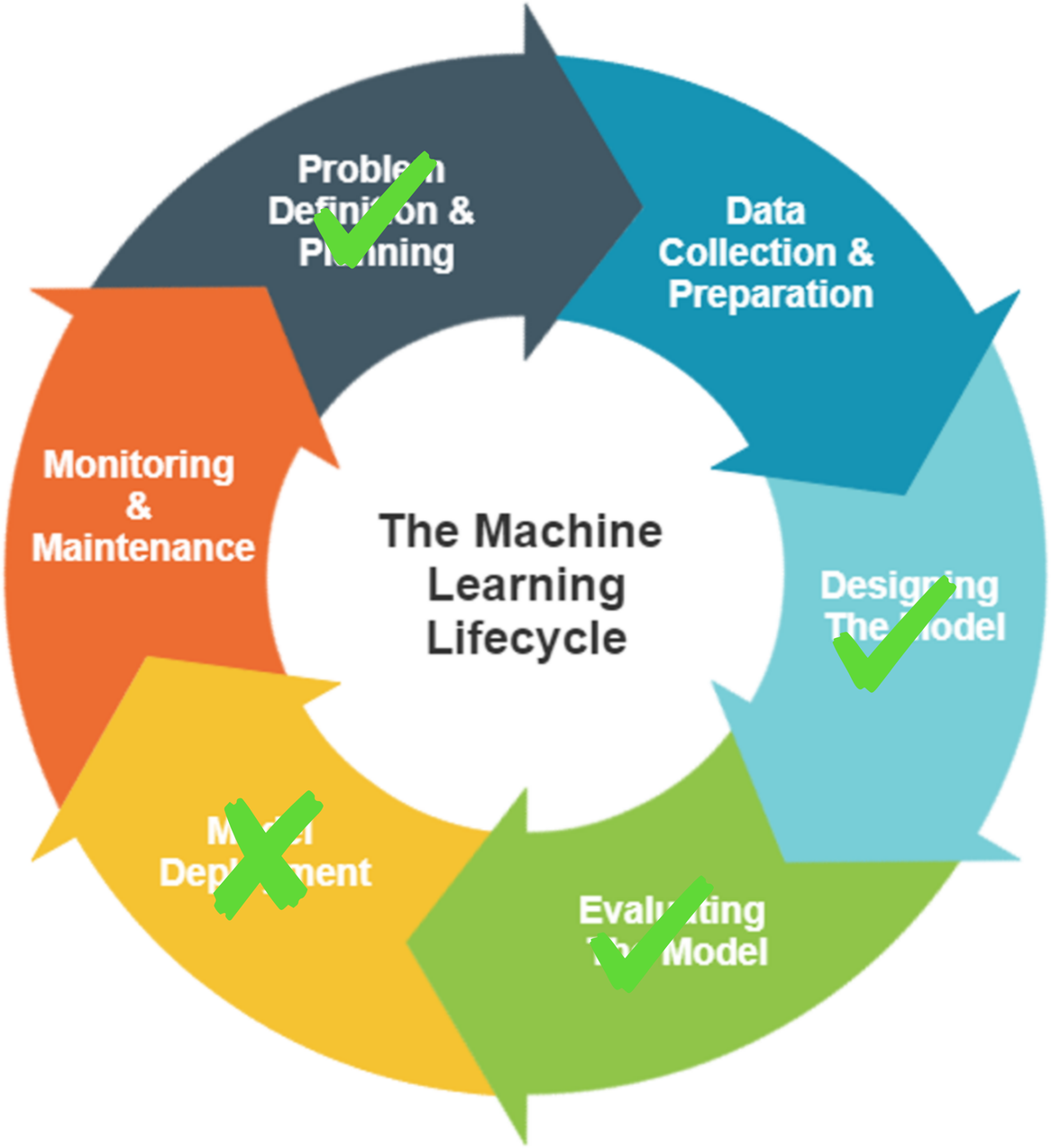

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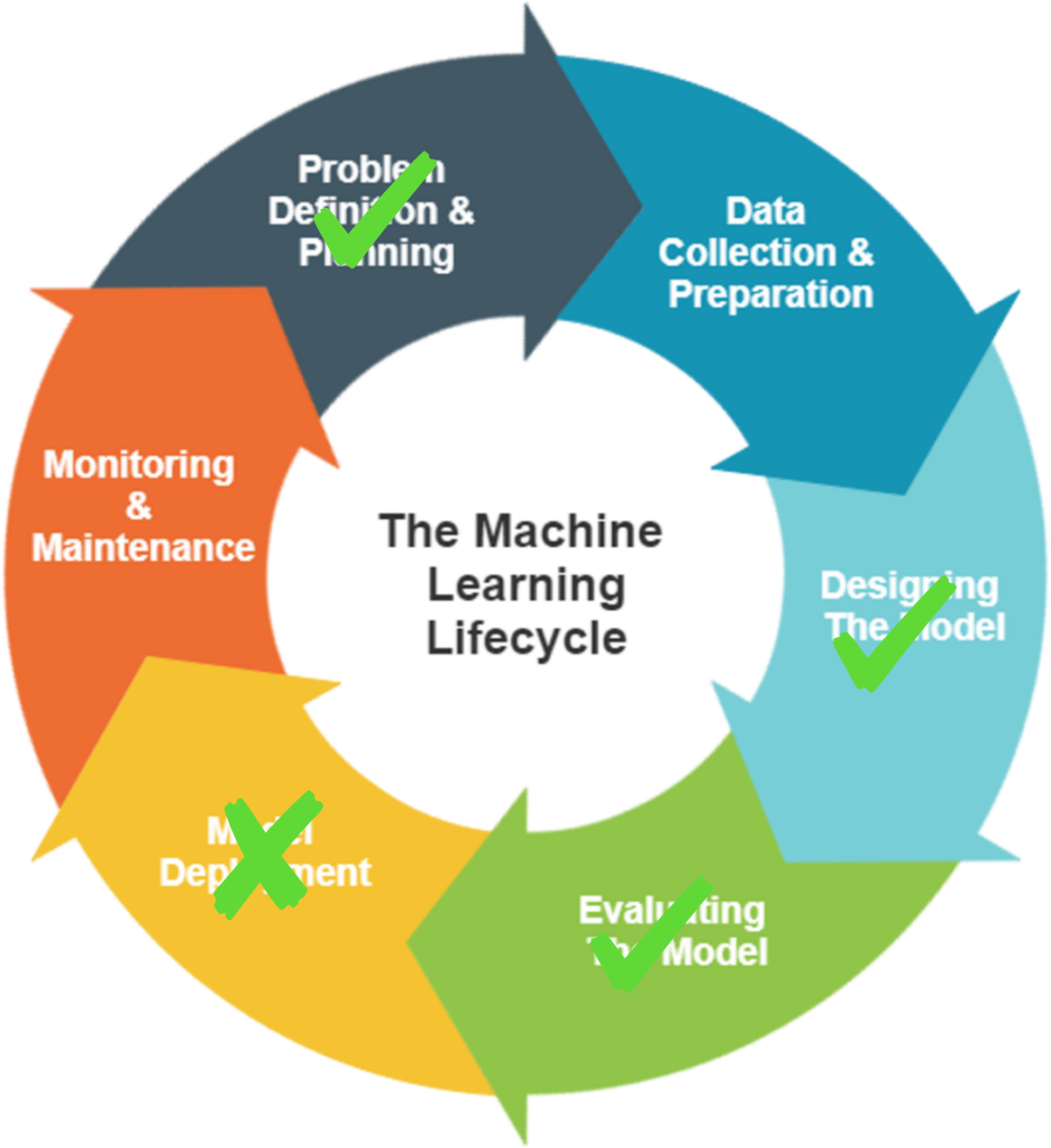

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Bridging the Gap

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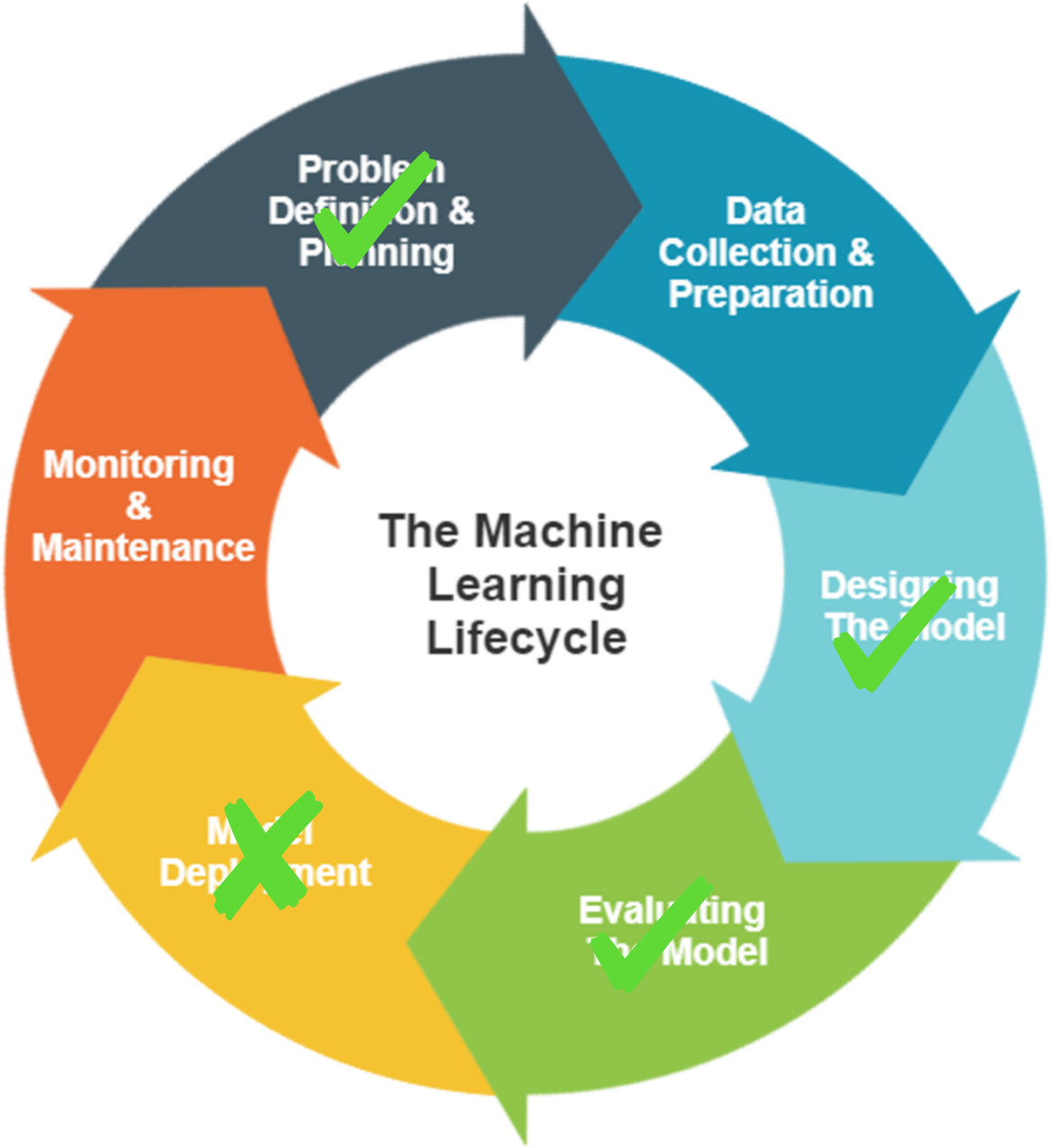

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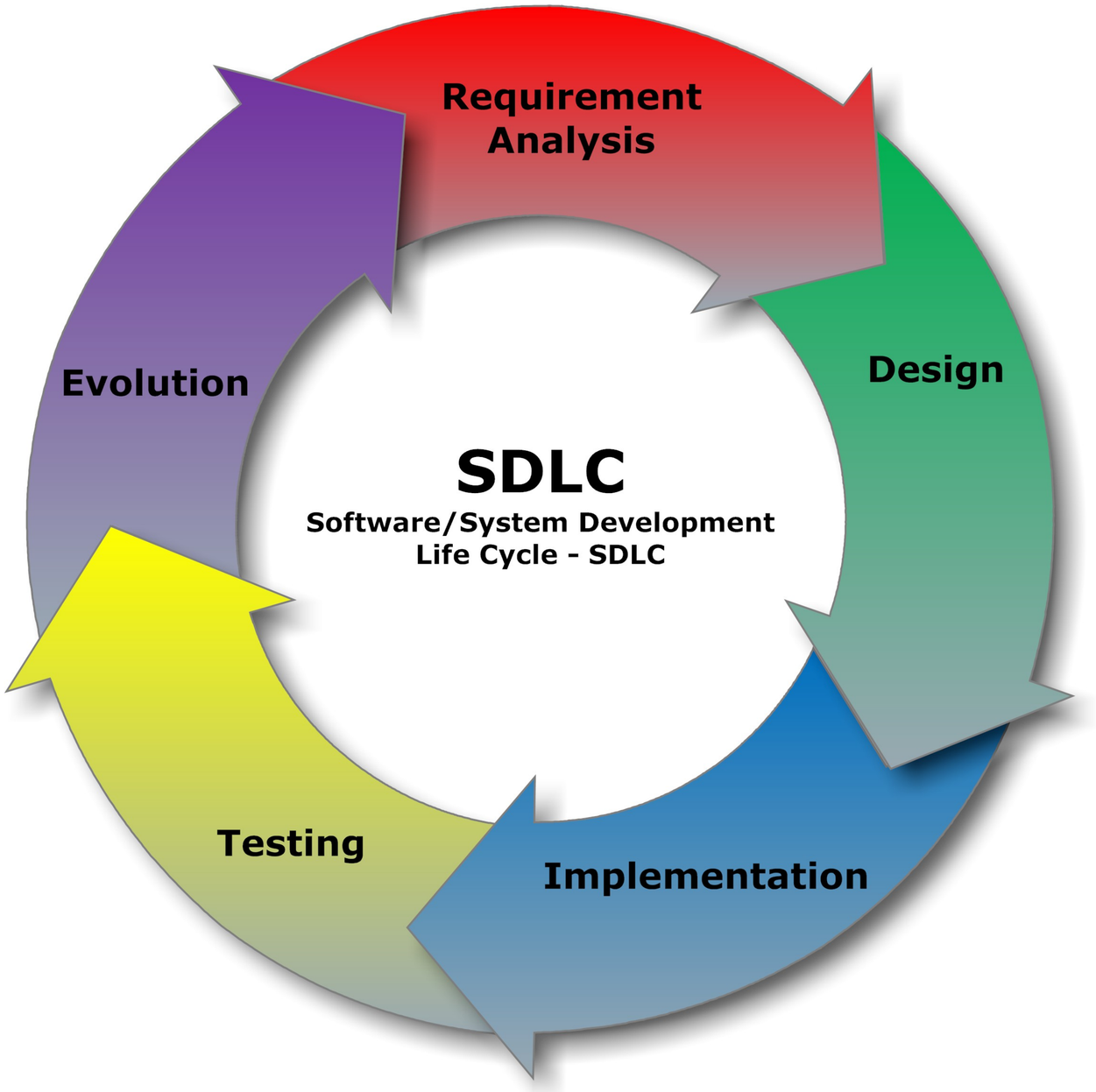
Data Gathering

Model Development



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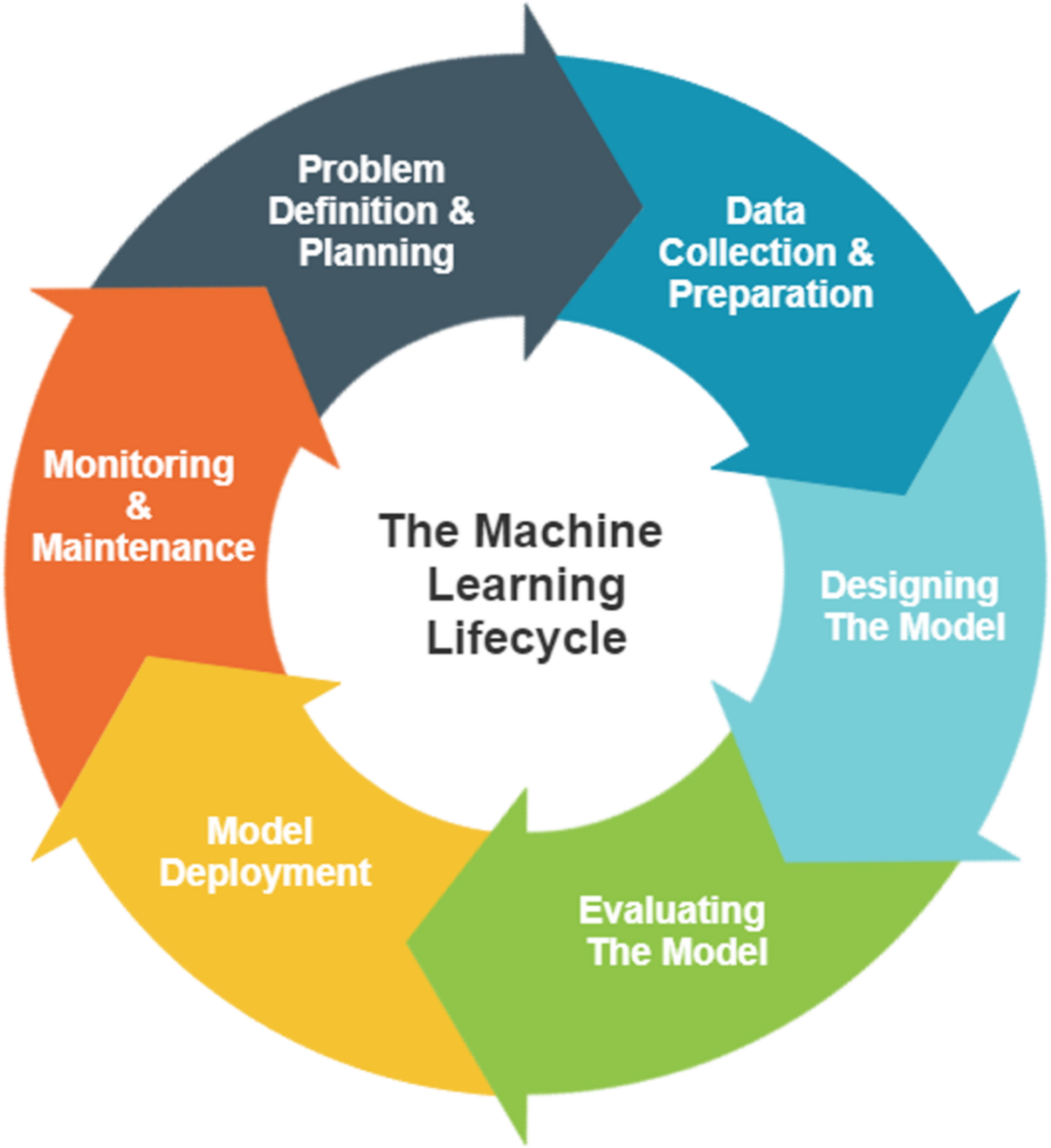

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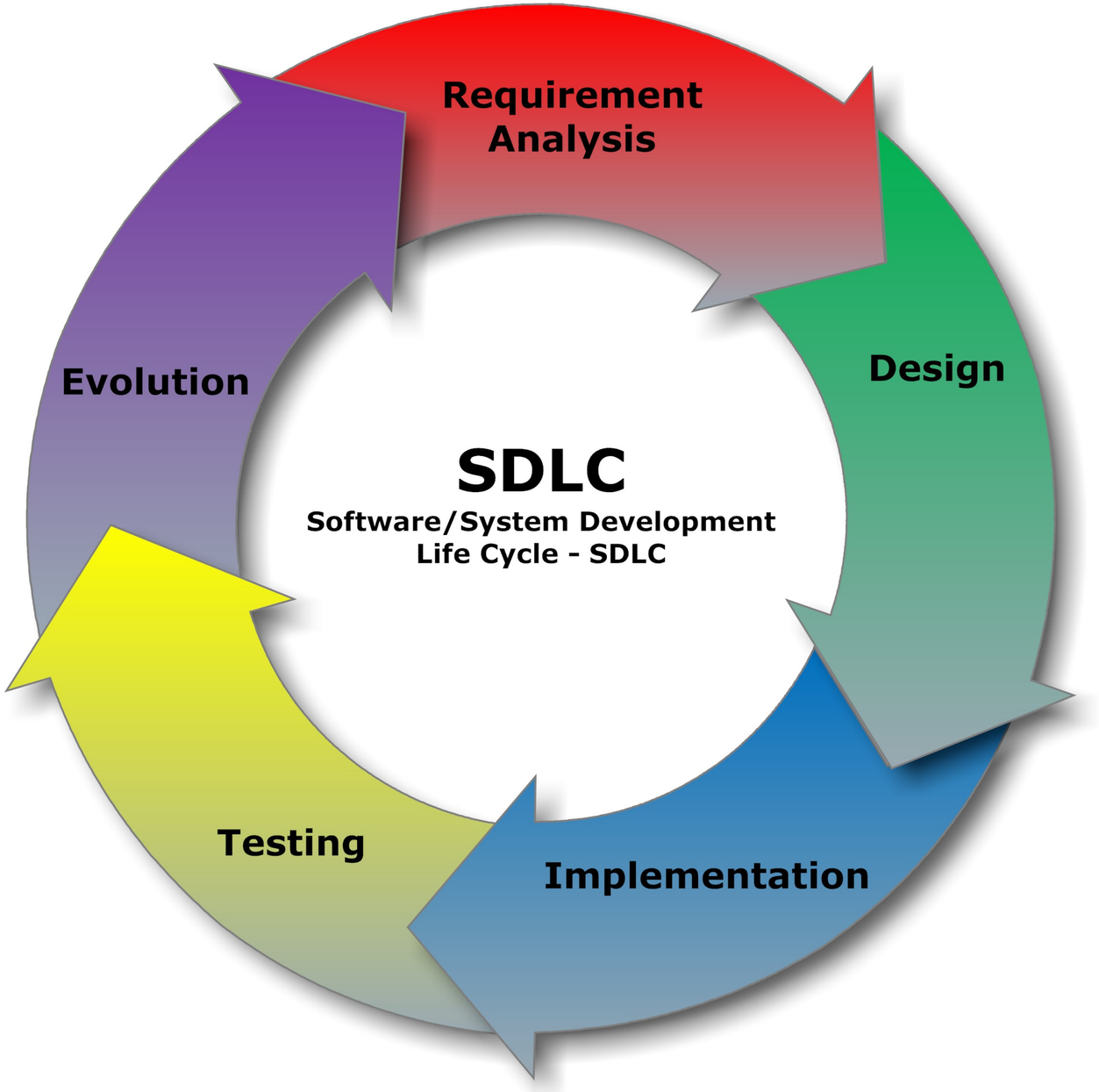

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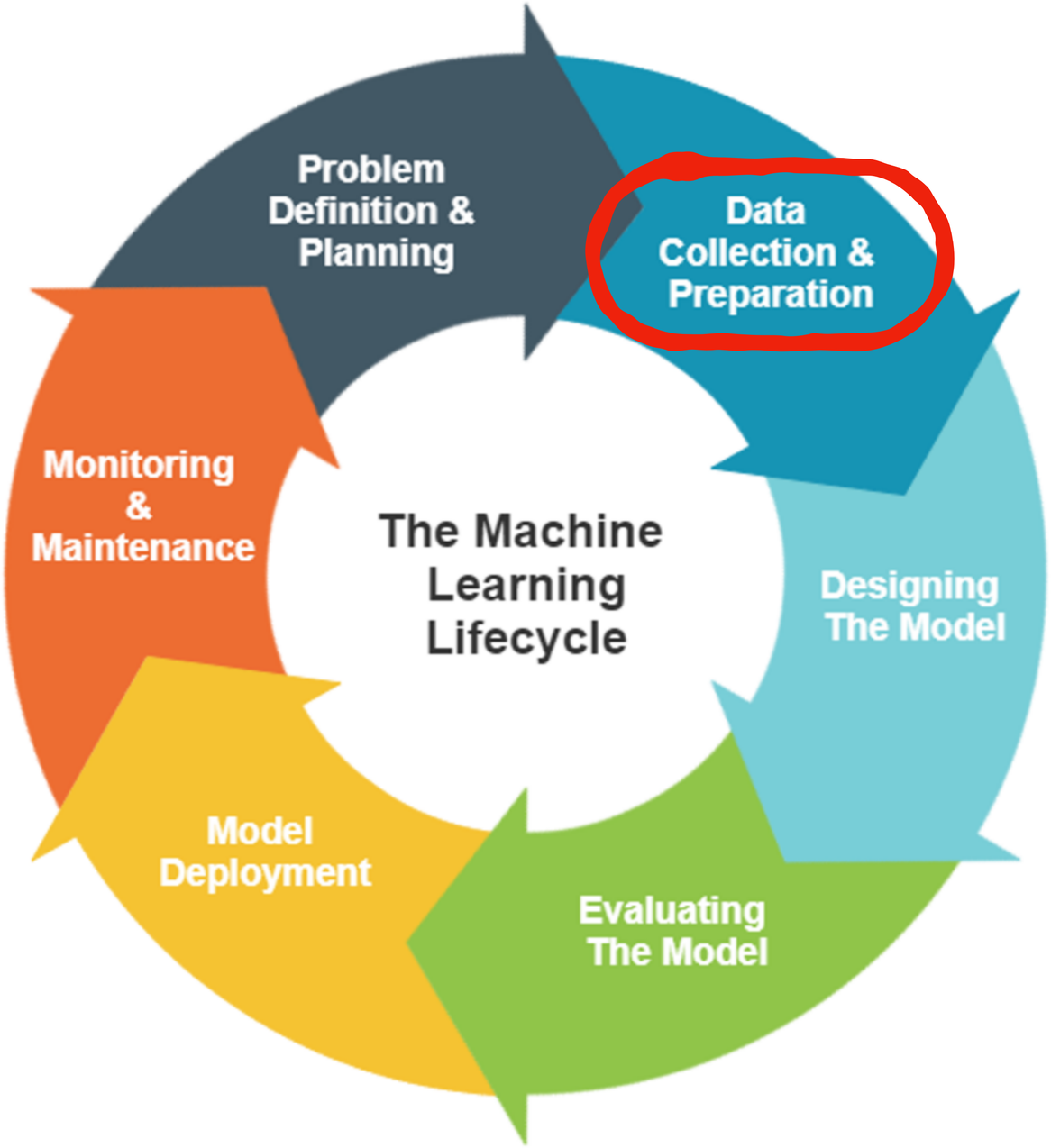

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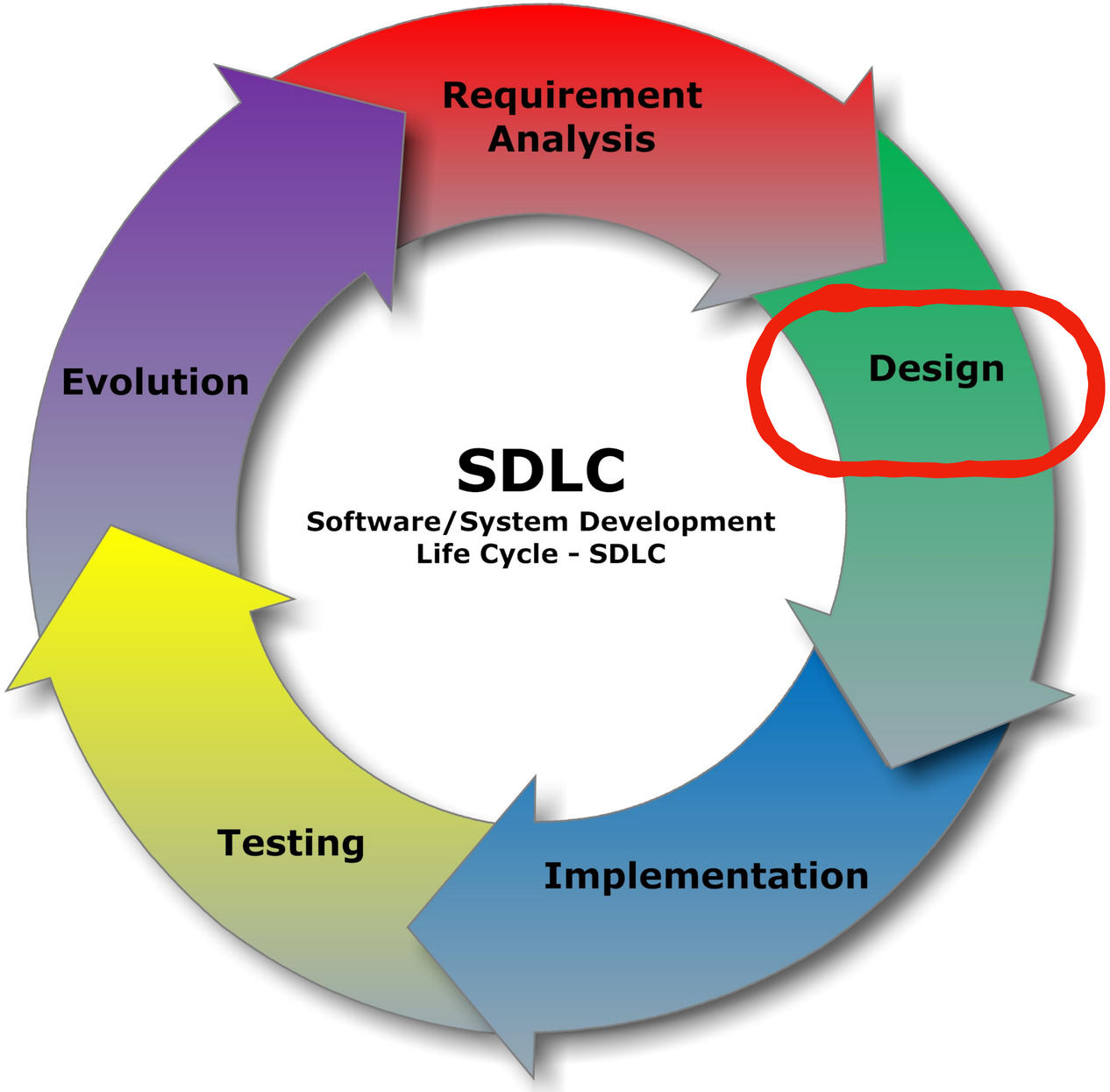

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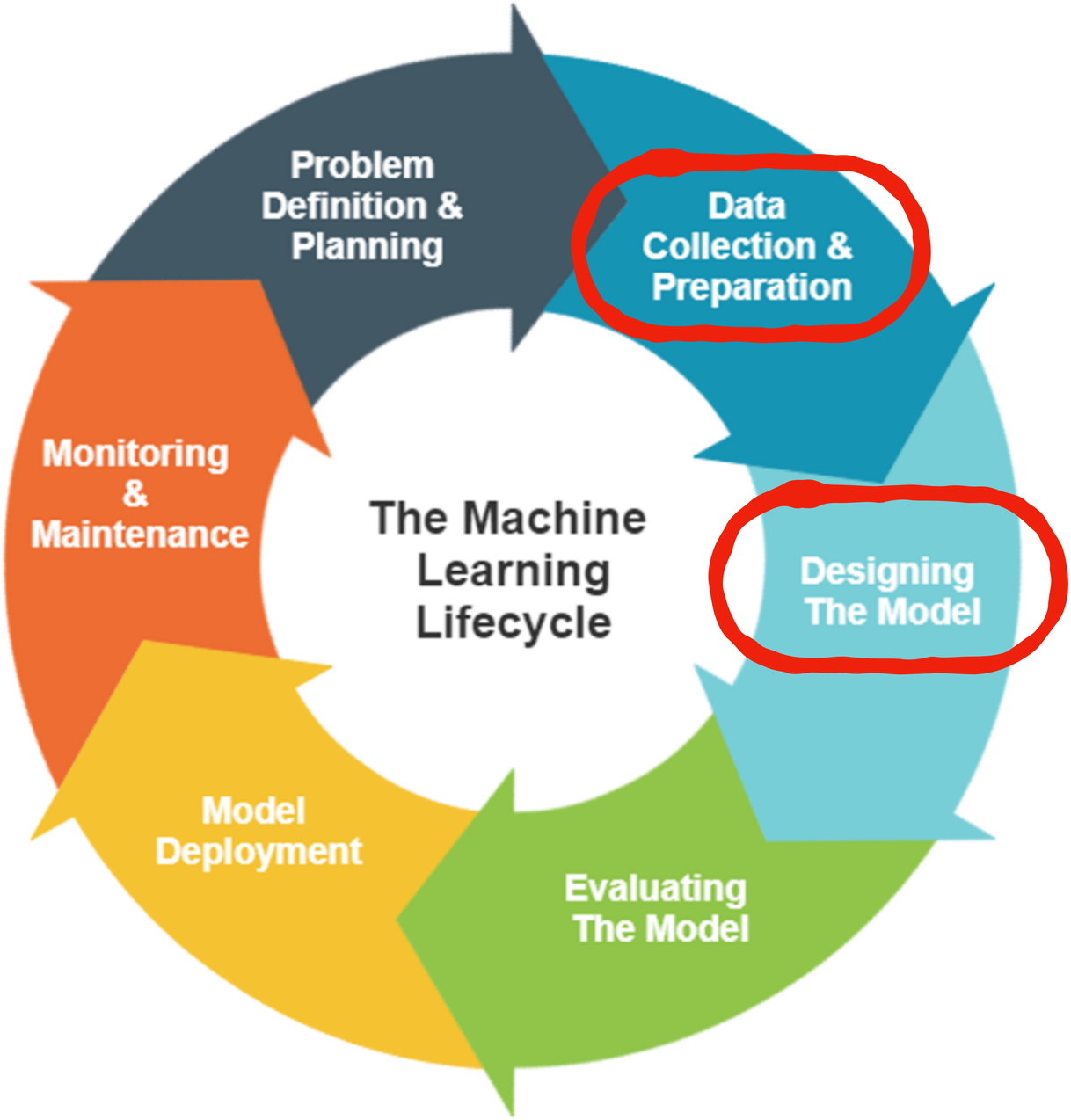

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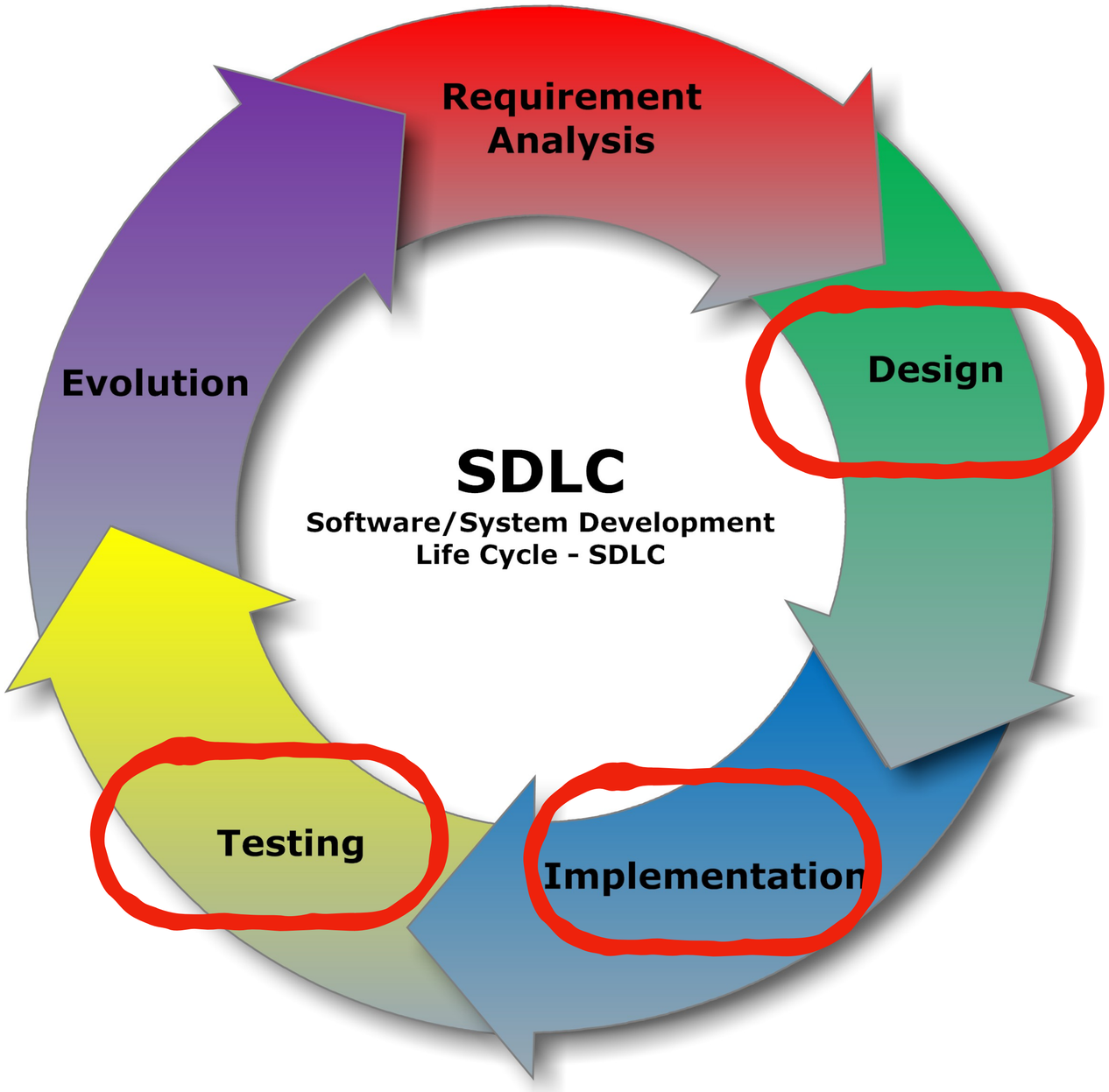

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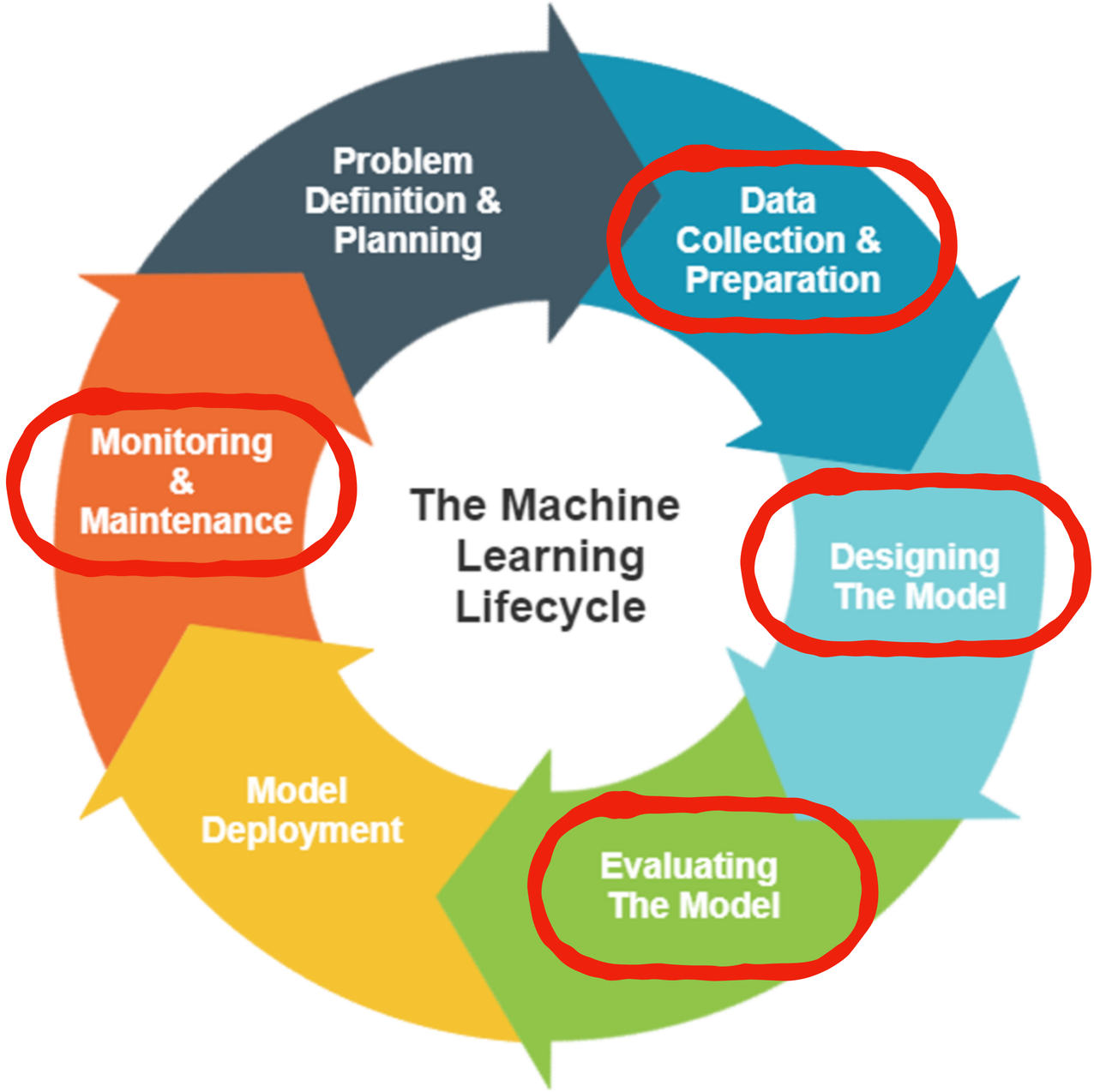

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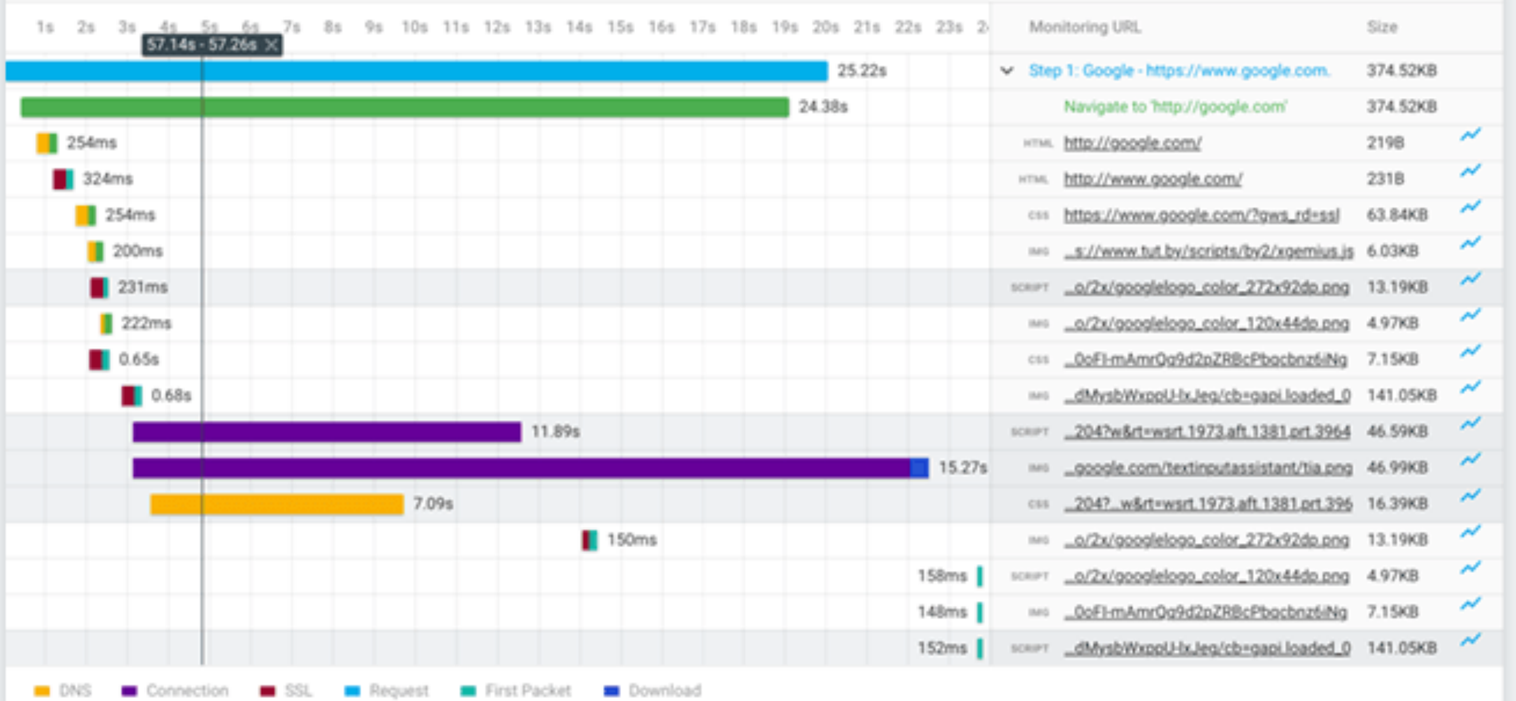
Data Gathering

Performance Testing

Waterfall Chart

Monitoring Date, Time: 7/28/2018 at 9:28:48:34 PM From: monitor 2_rum3 Network Requests Actions Navigation Timings All Selected



Monitoring URL	Size
Step 1: Google - https://www.google.com.	374.52KB
Navigate to 'http://google.com'	374.52KB
http://google.com/	219B
http://www.google.com/	231B
https://www.google.com/?gws_rd=ssl	63.84KB
...s://www.tut.by/scripts/by2/xgemius.js	6.03KB
.../2x/googlelogo_color_272x92dp.png	13.19KB
.../2x/googlelogo_color_120x44dp.png	4.97KB
...0oFI-mAmr0g9d2pZR8cPbqcbnz6iNg	7.15KB
...dMysbWxppU-lxJeq/cb=gapi.loaded_0	141.05KB
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.../google.com/textinputassistant/tia.png	46.99KB
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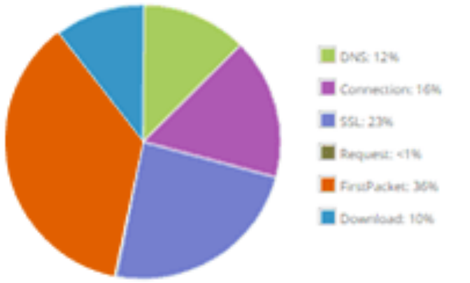
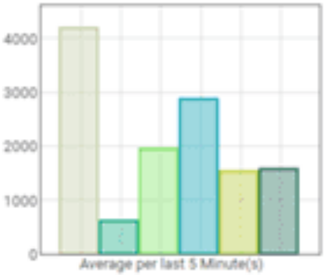
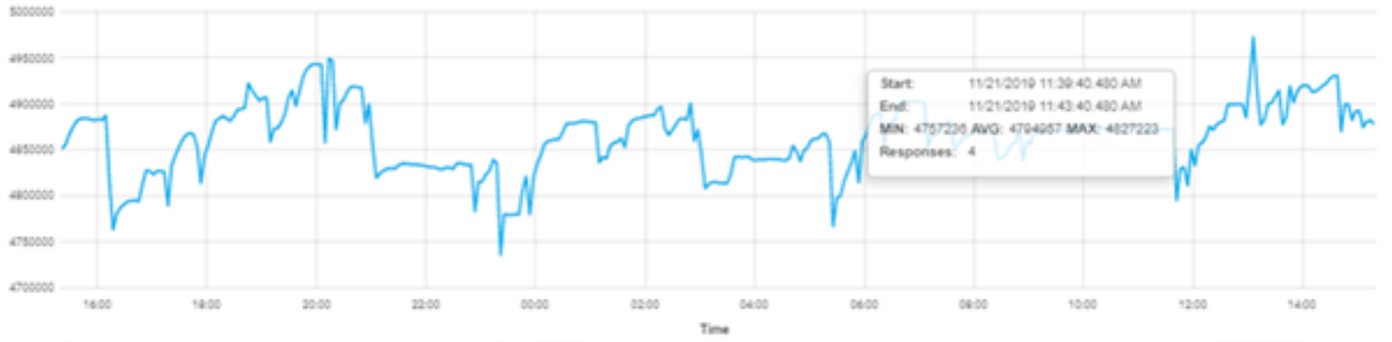
Performance Report



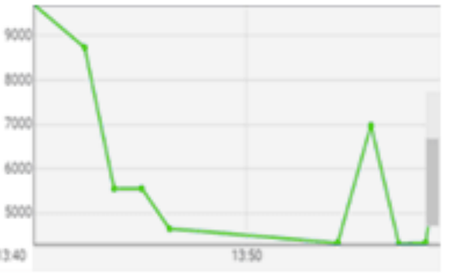
Av. Response Time



Response Time



Response Time



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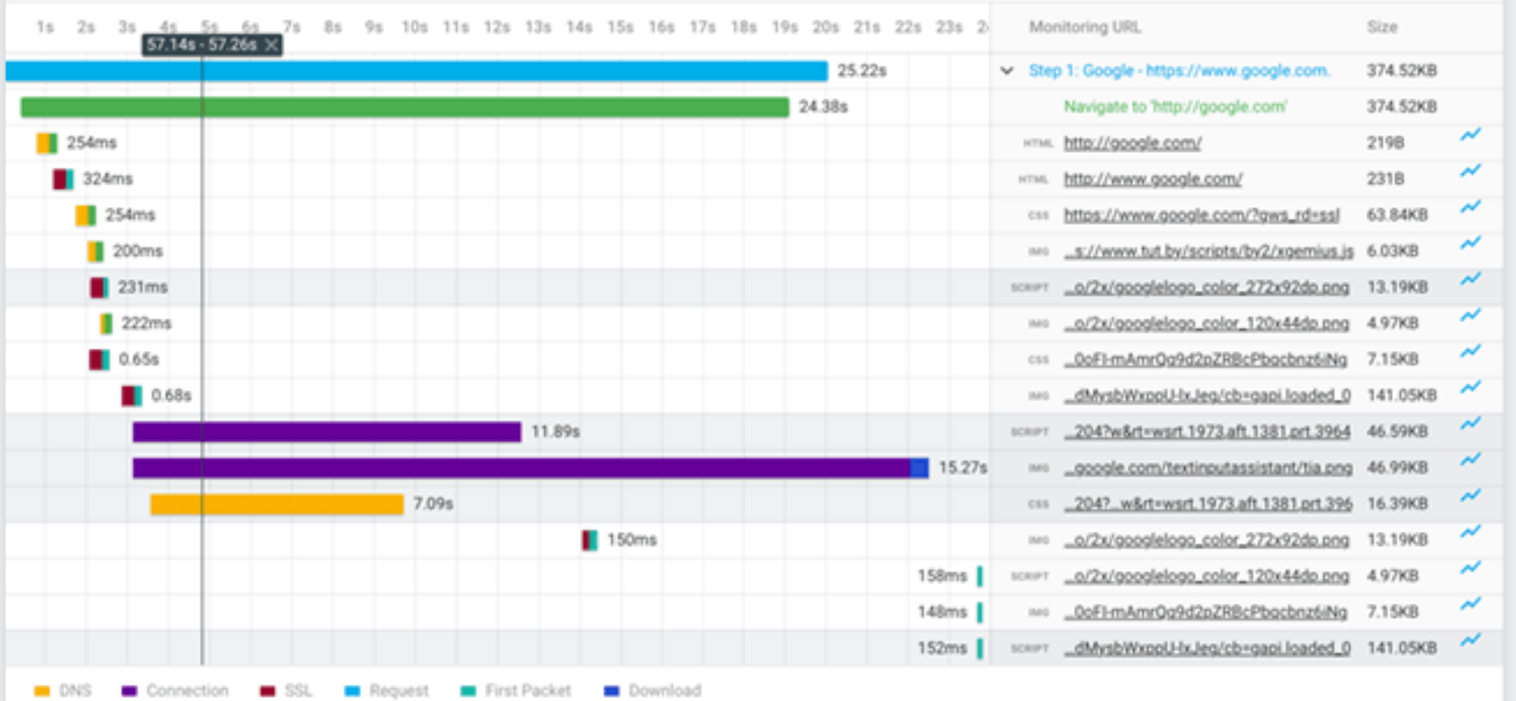

Monitoring URL	Size
Step 1: Google - https://www.google.com.	374.52KB
Navigate to 'http://google.com'	374.52KB
http://google.com/	219B
http://www.google.com/	231B
https://www.google.com/?gws_rd=ssl	63.84KB
...s://www.tut.by/scripts/by2/xgemius.js	6.03KB
.../2x/googlelogo_color_272x92dp.png	13.19KB
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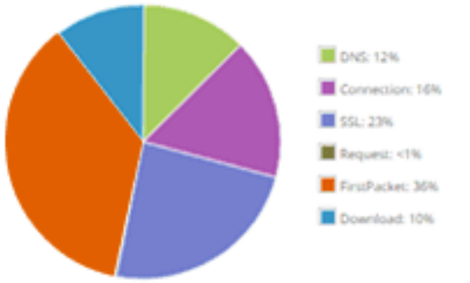
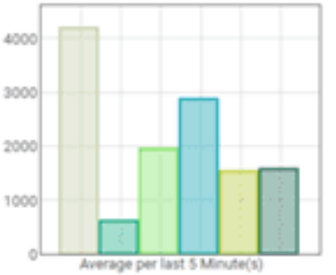
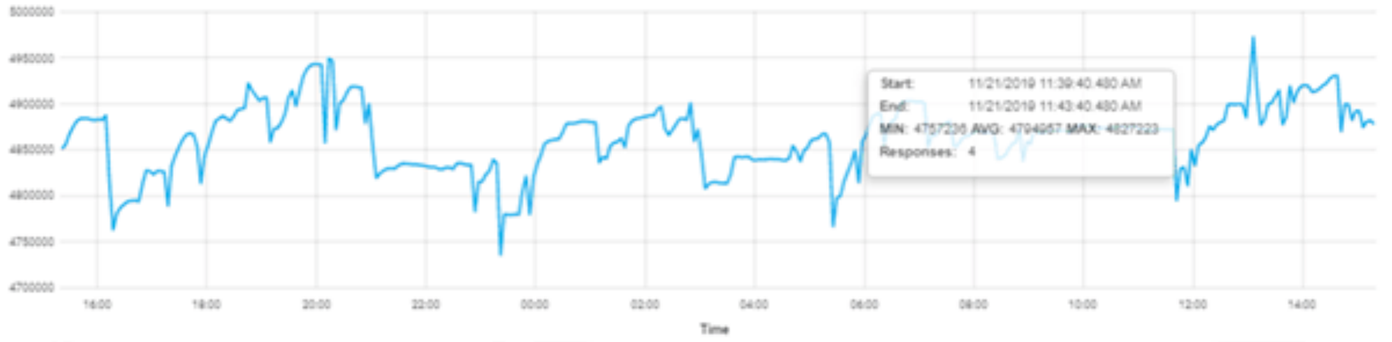
Performance Report



Av. Response Time



Response Time



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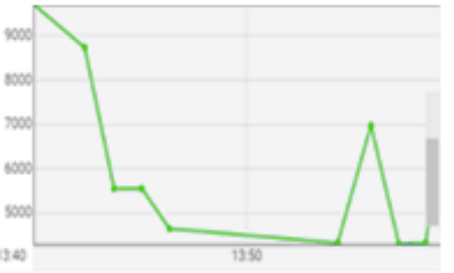


How wrong can I be?

How wrong can I be?

Monitoring

Website Overview

Zoom Out | Last 3 hours

Logins

190

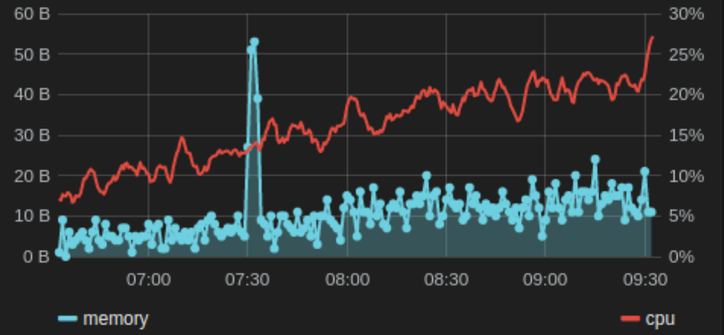
Sign ups

269

Sign outs

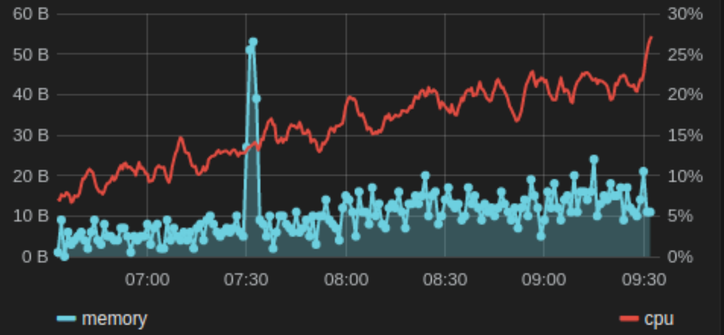
273

Memory / CPU

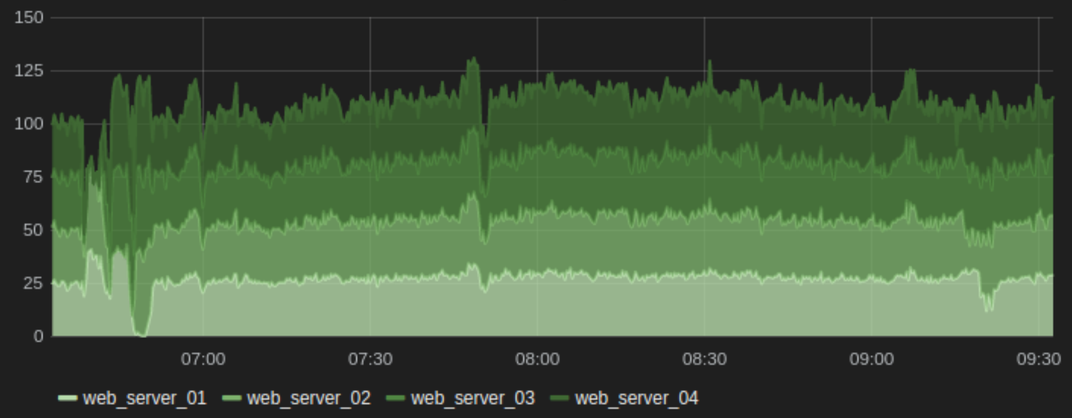


logins

Memory / CPU



server requests



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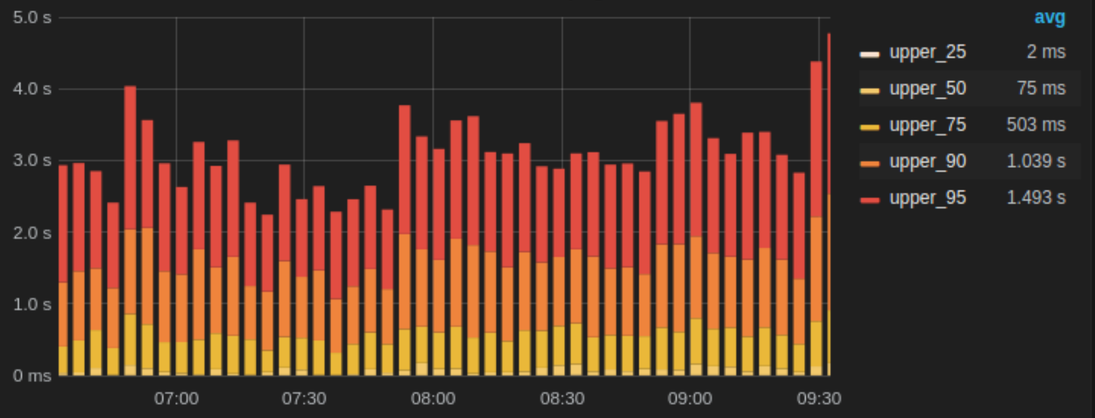
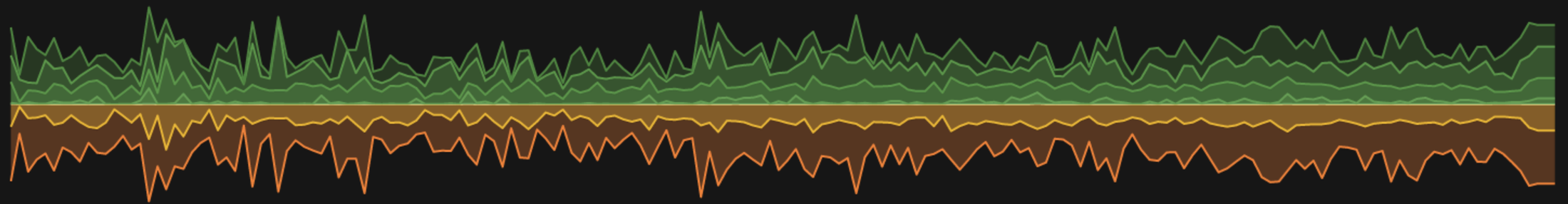




Website Overview

Zoom Out | Last 3 hours

Logins

190

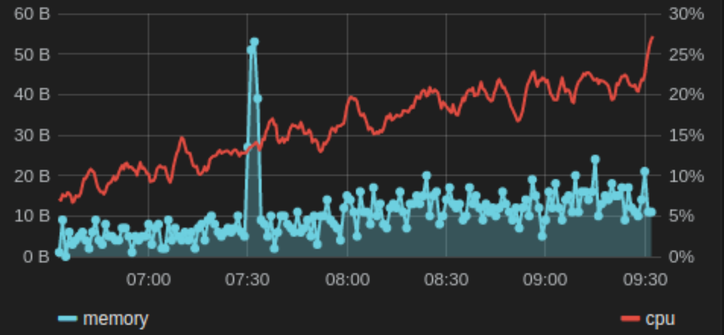
Sign ups

269

Sign outs

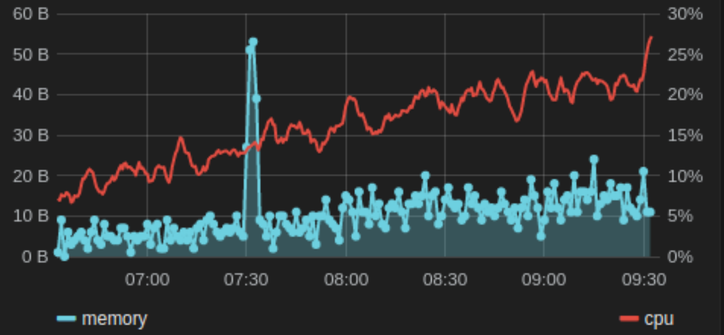
273

Memory / CPU



logins

Memory / CPU



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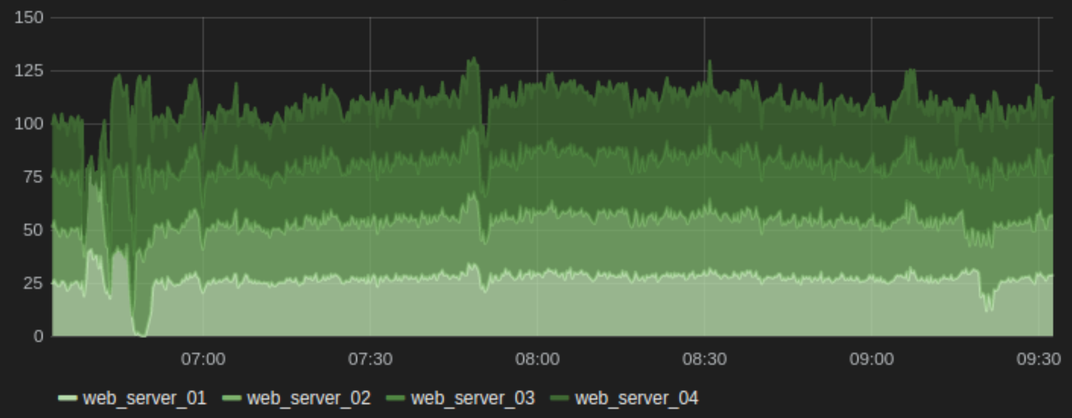

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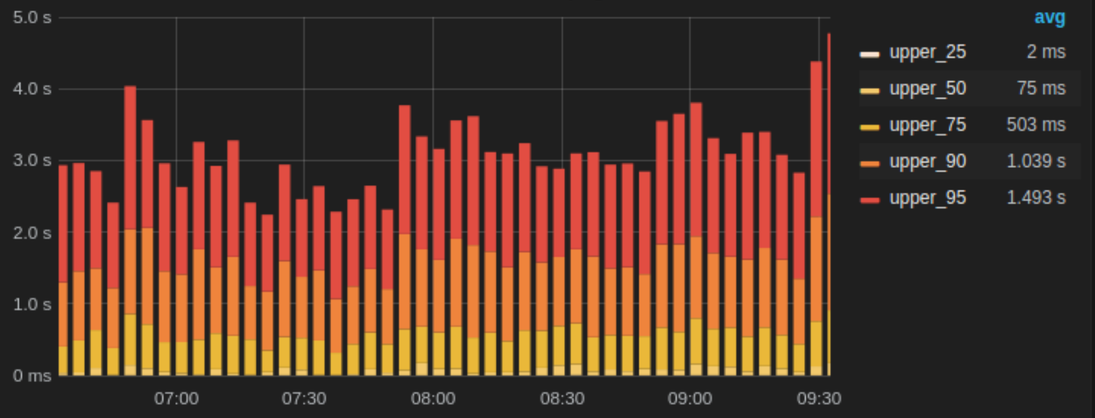
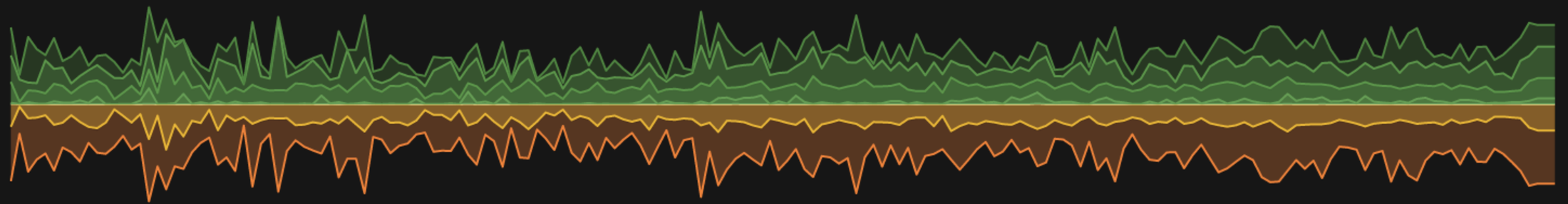
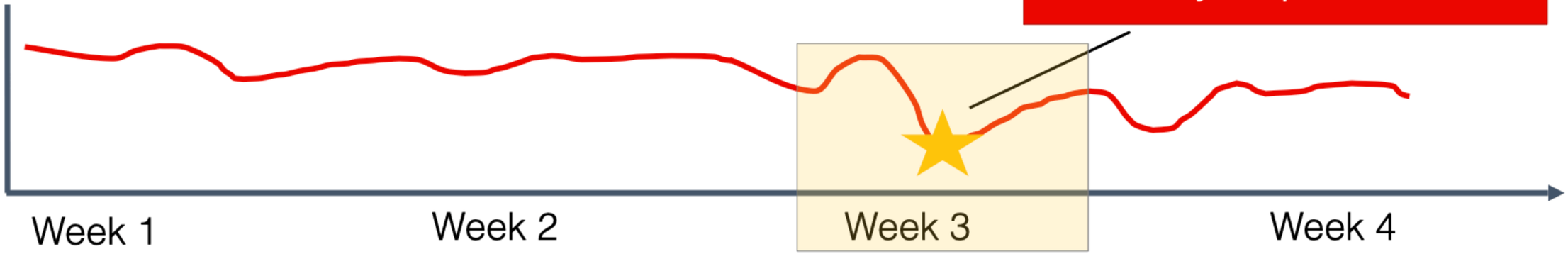




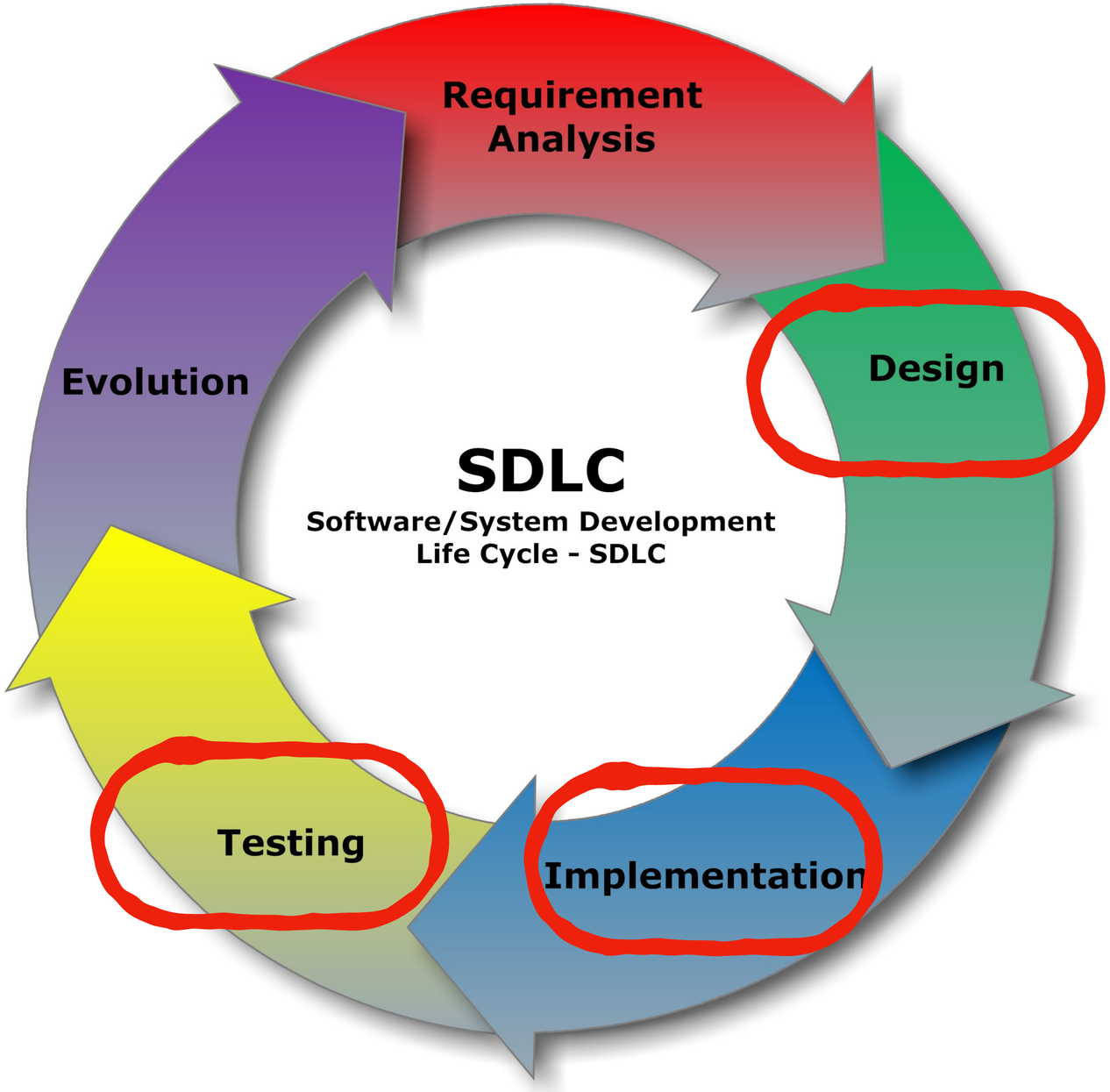
Accuracy over time

Quality drop detected!

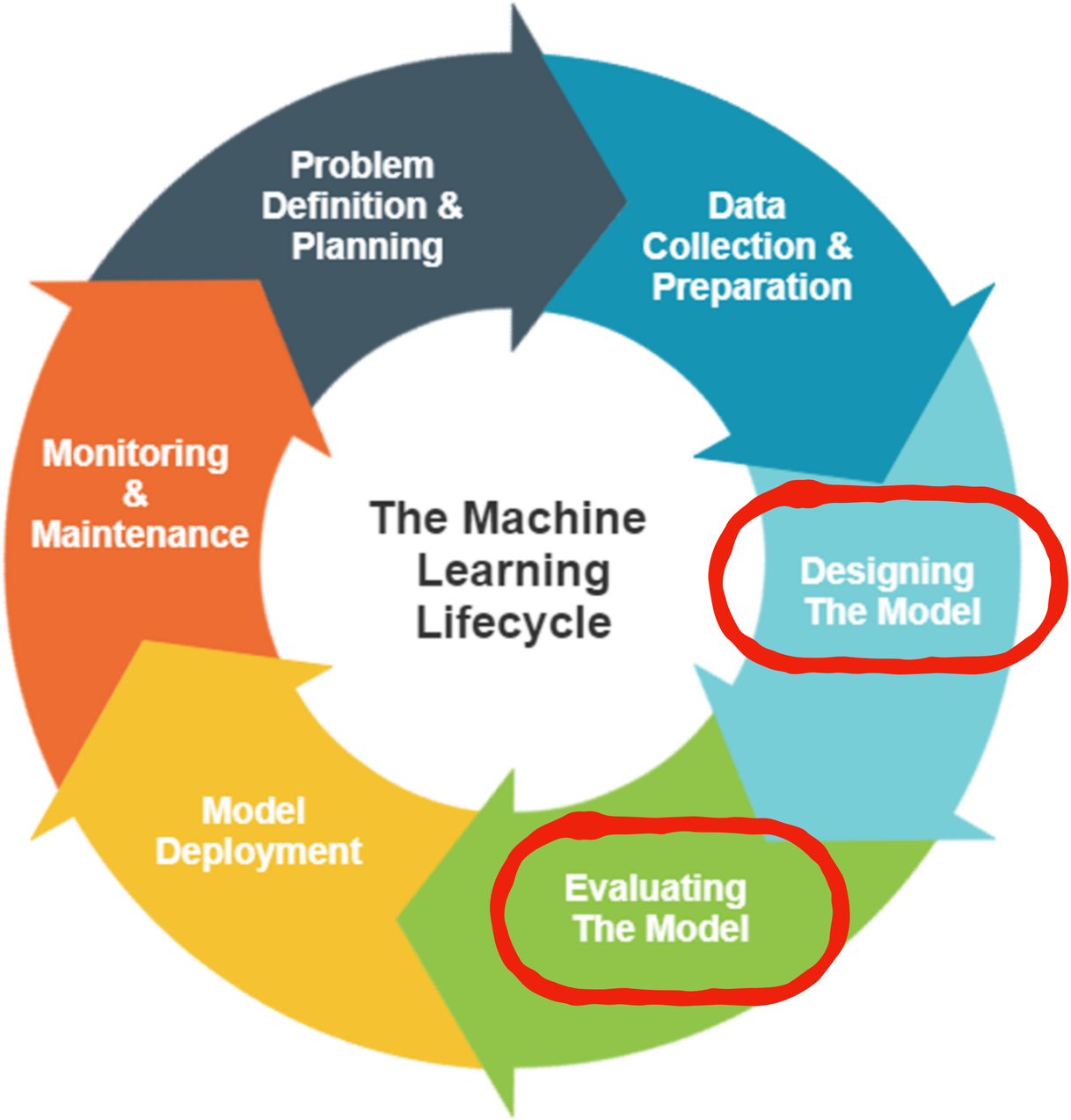


Model drift alert!

10 features out of 30 are drifting. Here is a summary…



Cliffydcw, CC BY-SA 3.0, via Wikimedia Commons



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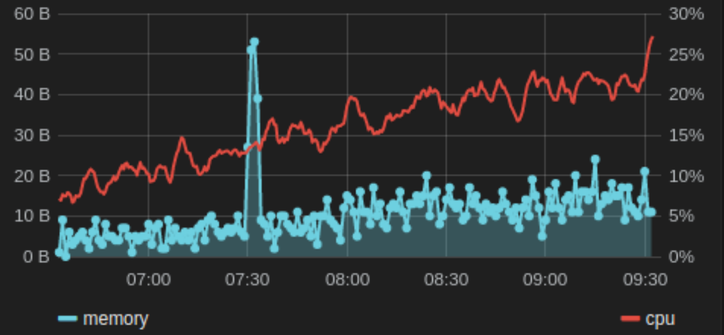
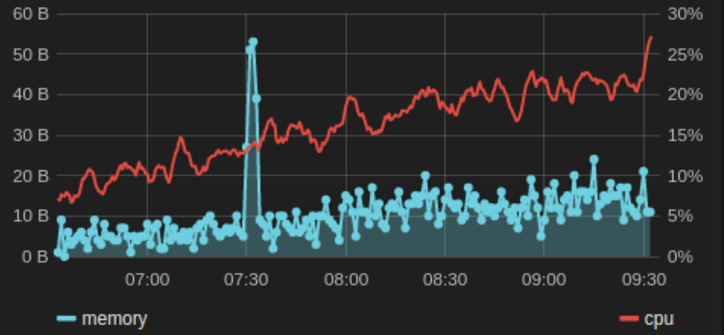
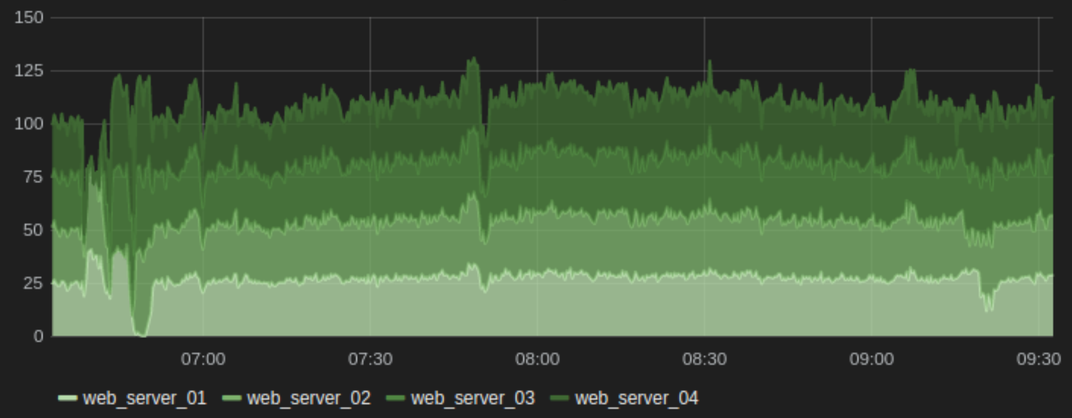


logins

Memory / CPU



server requests



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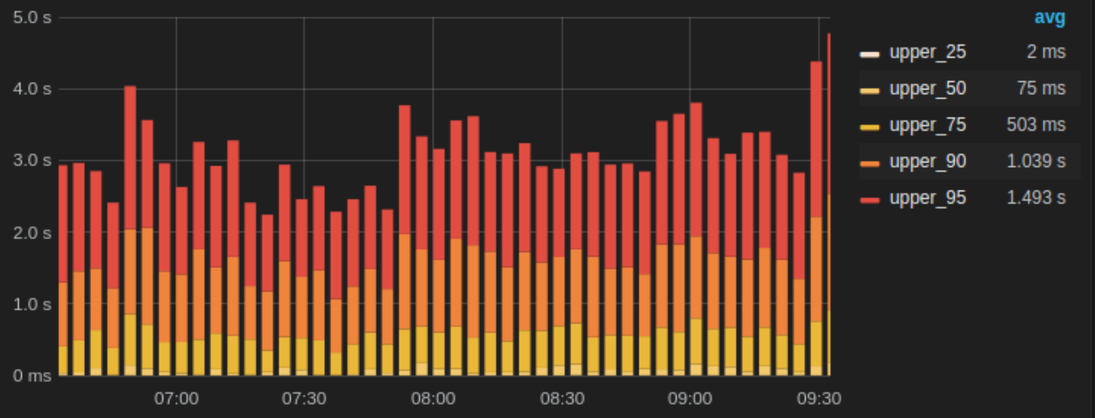

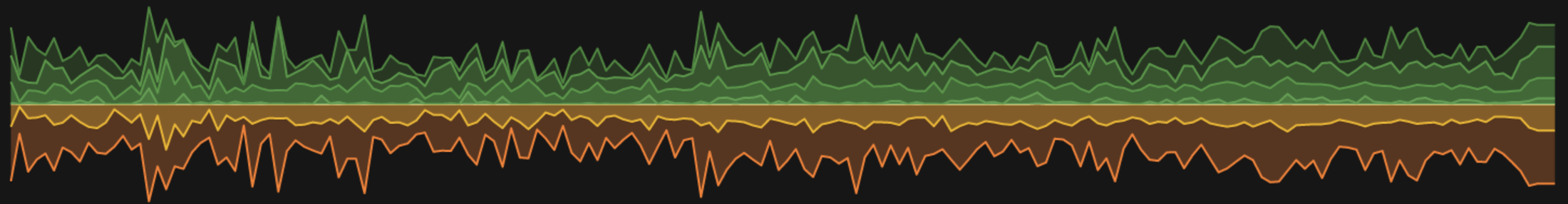

Resources

Learn more about ML Ops

- AI+ — https://aiplus.training
- MLOps — https://ml-ops.org
- NVIDIA — https://developer.nvidia.com/blog/mastering-llm-techniques-llmops/

Feedback

https://confoo.ca/en/2025/feedback/C6D97B4D3AD086CD18220A79734FB9C3