# RISE OF KNOWLEDGE-OPS

\naa.luhj.aaps\ Management and optimization of an organization's knowledge assets and processes

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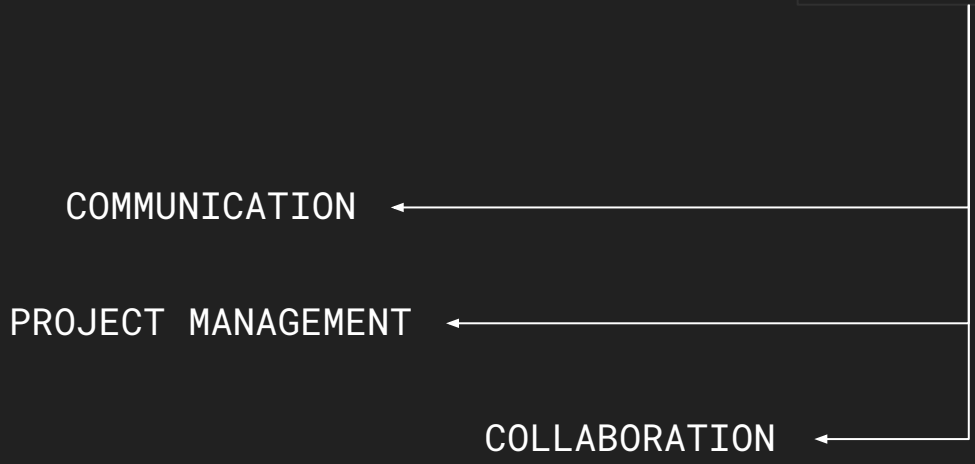


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What's a recent successful example of this?

DevOps



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# DevOps

- DevOps is a set of practices, tools, and a cultural philosophy that automate and integrate the processes between software development and IT teams
- It emphasizes:
  - team empowerment
  - cross-team communication and collaboration
  - technology automation
- Began around 2007

99 percent of respondents said that DevOps had a positive impact on their organization [source]

Elite practitioners release 208 times more frequently and 106 times faster than low-performing teams. And it's not just speed to market, DevOps yields improved quality, with elite teams boasting a change failure rate seven times lower compared to low-performing teams [source]



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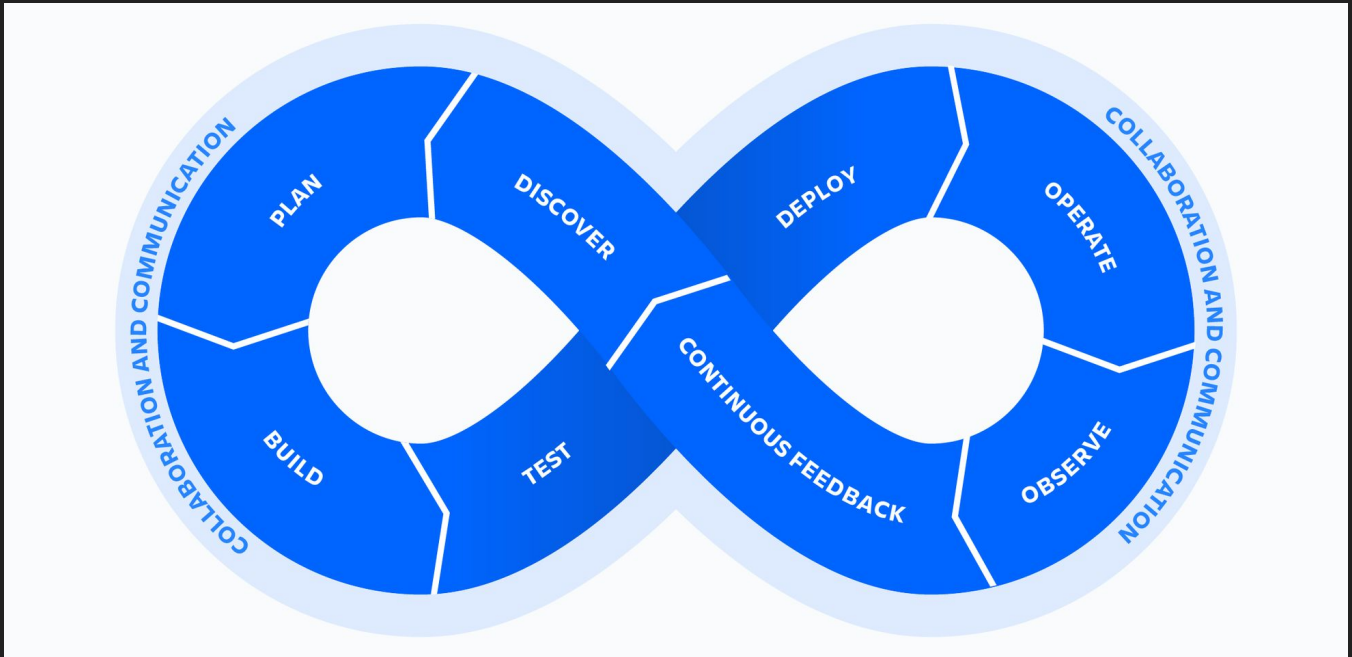
# DevOps Practices

- Agile Project Management
- **Shifting Left (CI/CD)**
  - the practice of moving *automated* testing, quality, and performance evaluation early in the dev process to *catch errors when they're less expensive to fix*
- Monitoring
  - the practice of tracking and measuring the performance and health of systems and applications in order to identify and correct issues early
- Observability
  - tooling or a technical solution that allows teams to actively debug their system
- Continuous Feedback
  - evaluates the effect of each release on the user experience and then reports that evaluation back to the DevOps team to improve future releases

# DevOps Tools (PRODUCT OPERATIONS LIFECYCLE)



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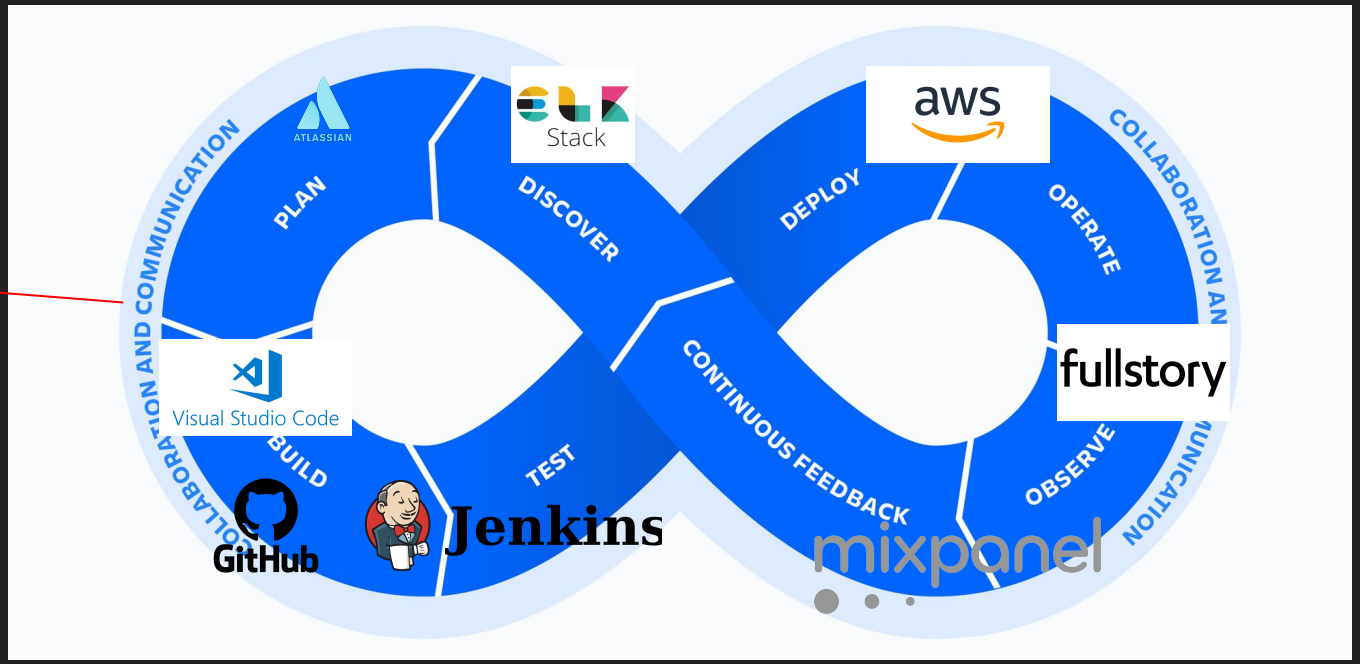
# DevOps Tools




Read more: https://raygun.com/blog/best-devops-tools/
See more: https://www.pinterest.ca/pin/857443216533682037/

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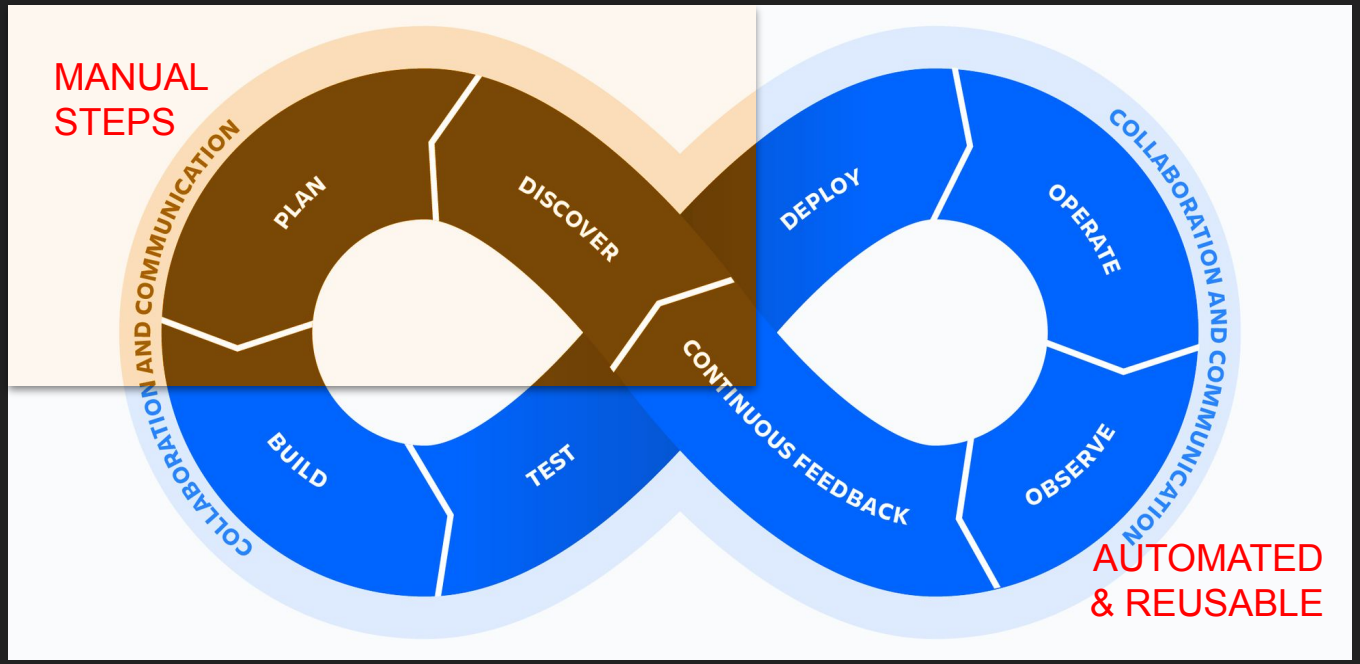
# DevOps Tools



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# DevOps → MLOps (ModelOps)

- Agile Project Management
- **Shifting Left (CI/CD)**
  - the practice of moving *automated* experimentation, data and model monitoring, testing, quality, and performance evaluation early in the dev process to *catch errors when they're less expensive to fix*
- Monitoring
  - the practice of tracking and measuring the performance and health of systems and applications in order to identify and correct issues early
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  - tooling or a technical solution that allows teams to actively debug their system
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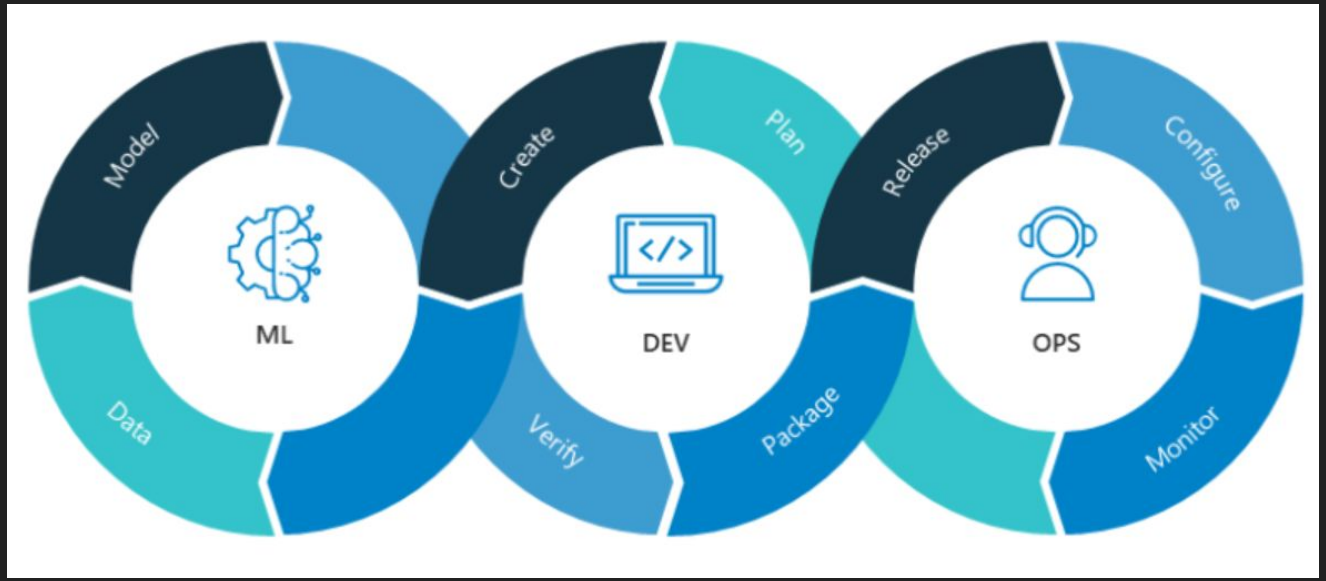
# ModelOps




https://vitalflux.com/differences-between-mlops-modelops-aiops-dataops/



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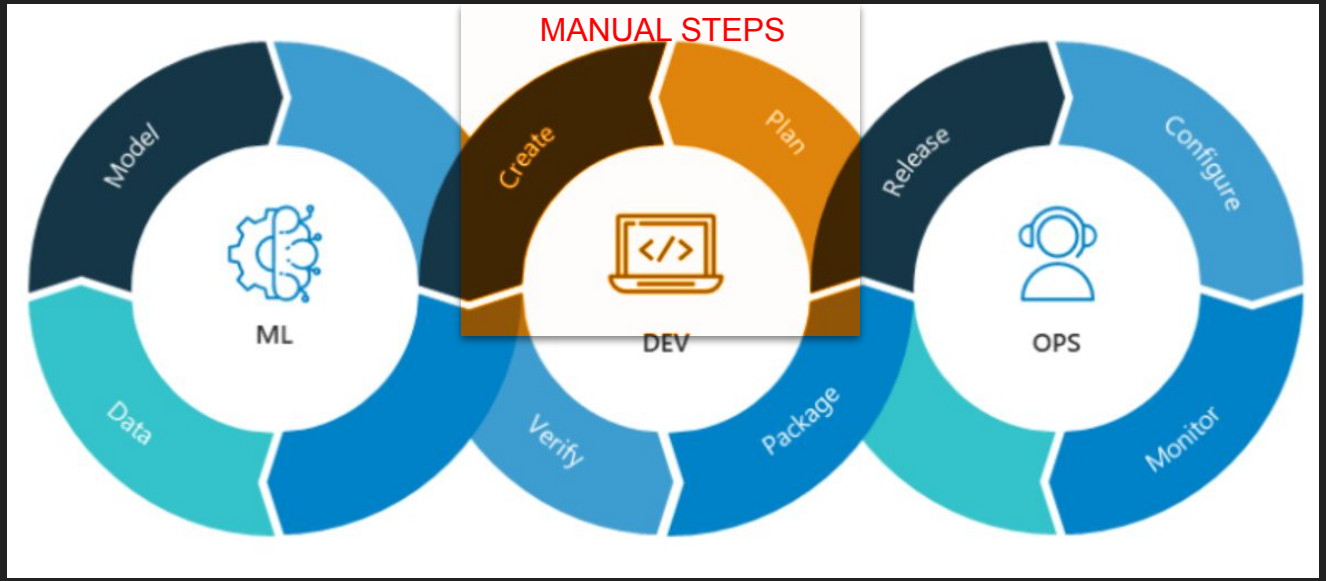
# ModelOps



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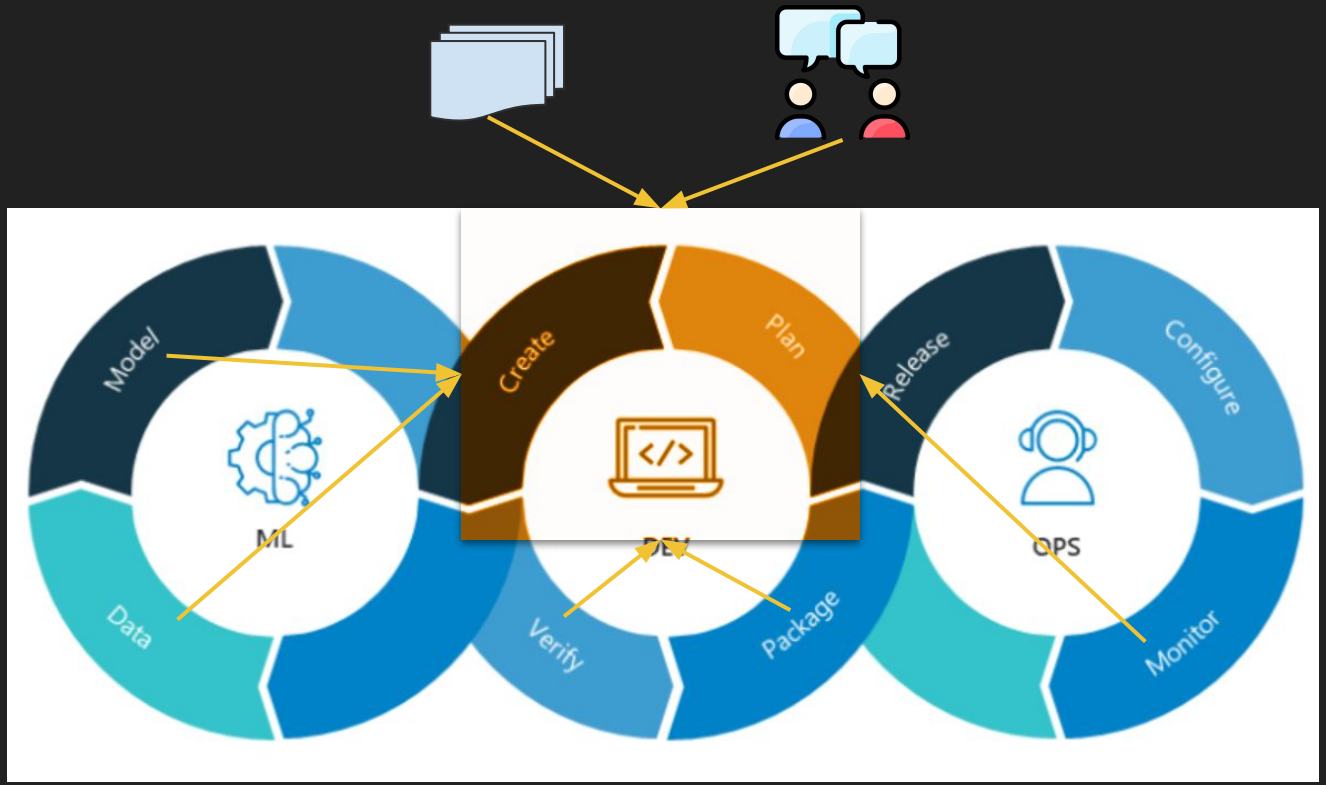




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# KNOWLEDGE-OPS

\naa.luhj.aaps\ Shifting further left into the knowledge intensive steps

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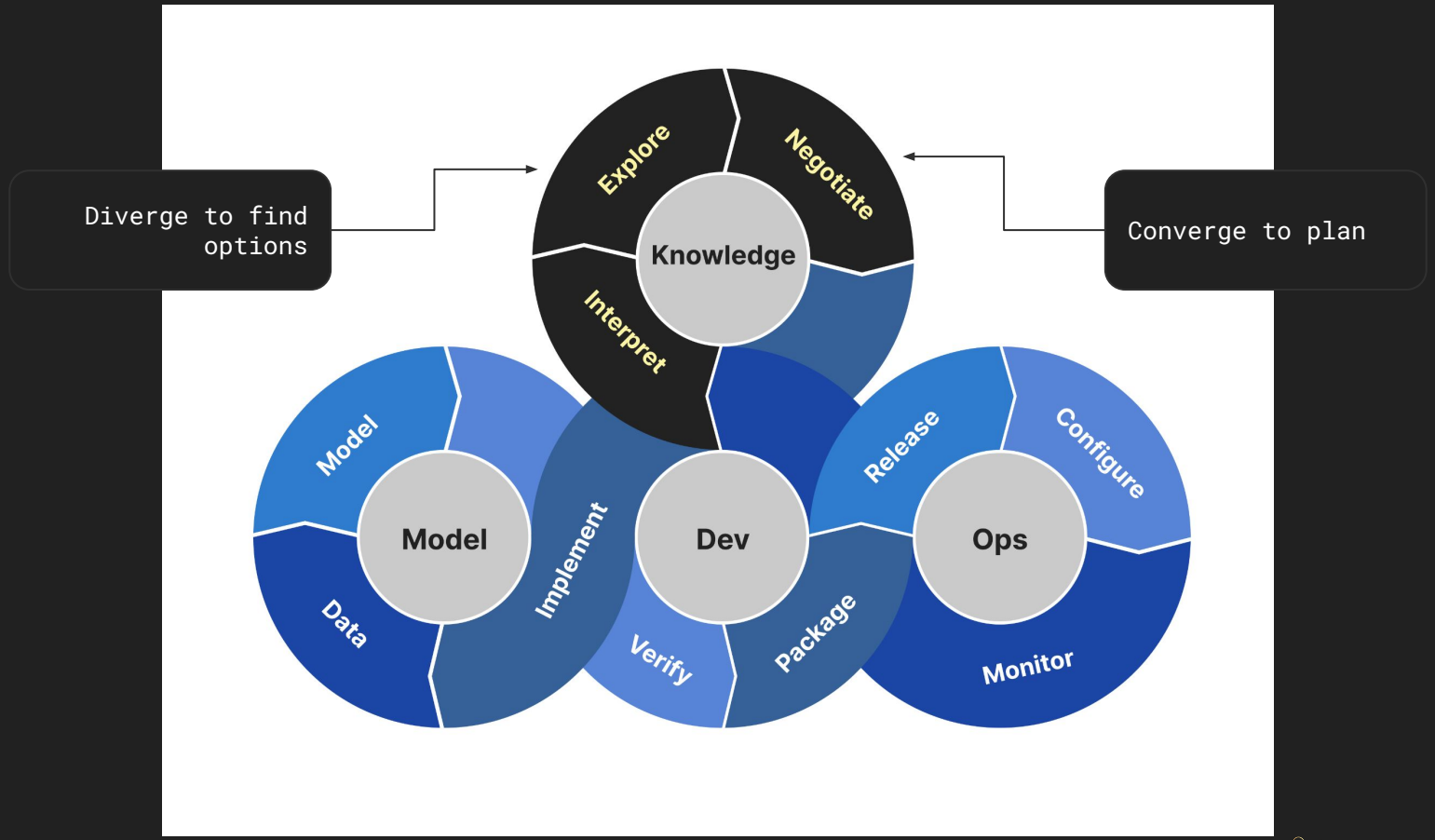
# DevOps → ModelOps → KnowledgeOps

- Agile Project Management
- **Shifting Left (CE/CI/CD)**
  - the practice of moving *automated* exploration, planning, coding, experimentation, data and model monitoring, testing, quality, and performance evaluation early in the dev process to *catch errors when they're less expensive to fix*
- Monitoring
  - the practice of tracking and measuring the performance and health of systems and applications in order to identify and correct issues early
- Observability
  - tooling or a technical solution that allows teams to actively debug their system
- Continuous Feedback
  - evaluates the effect of each release on the user experience and then reports that evaluation back to the DevOps team to improve future releases



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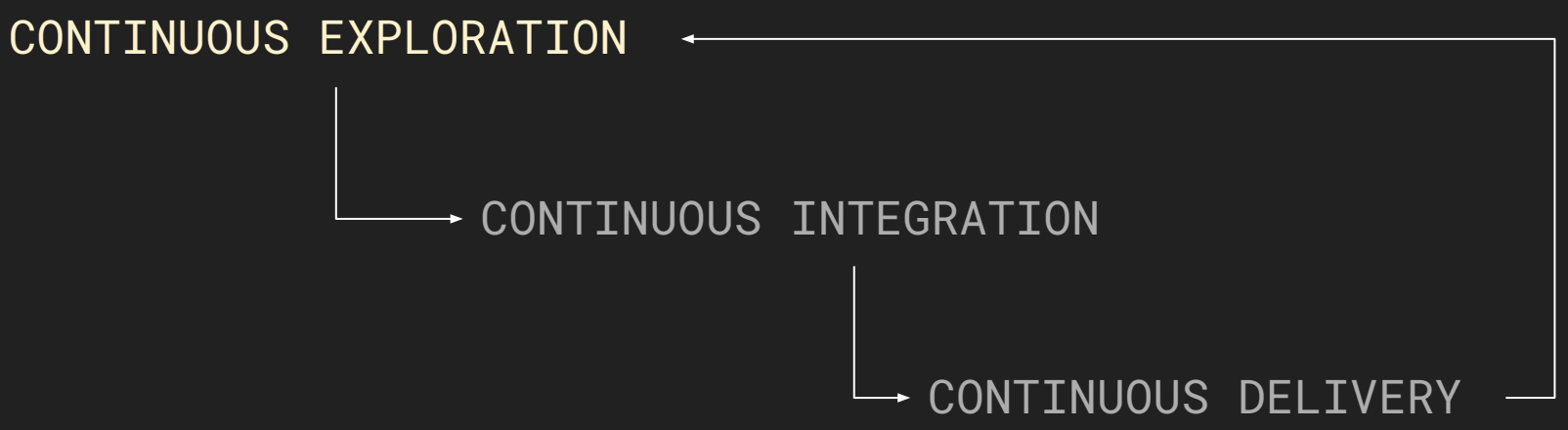
# CE/CI/CD



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Several Industry Trends are Merging to Enable Augmented Thinking & Experimentation

# What capabilities are needed?

LANGUAGE SKILLS
(eg. LLMs)

REASONING SKILLS
(eg. LLMs + tools)

MEMORY SKILLS
(eg. LLMs + IR sys)



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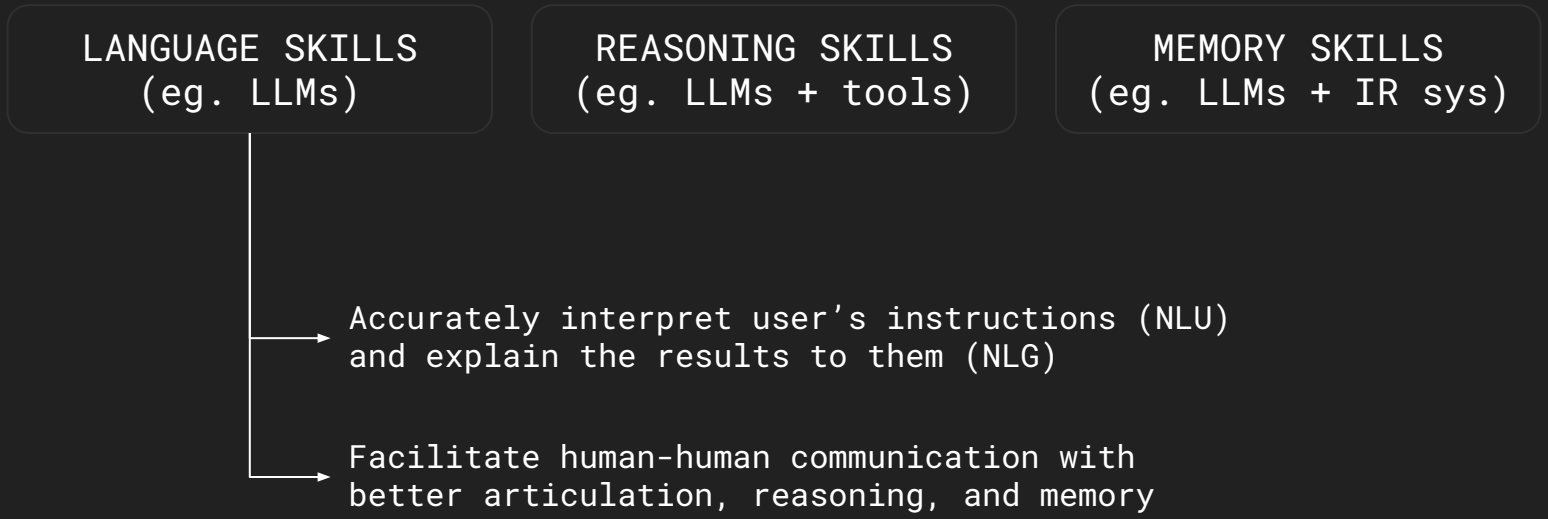
# What capabilities are needed?



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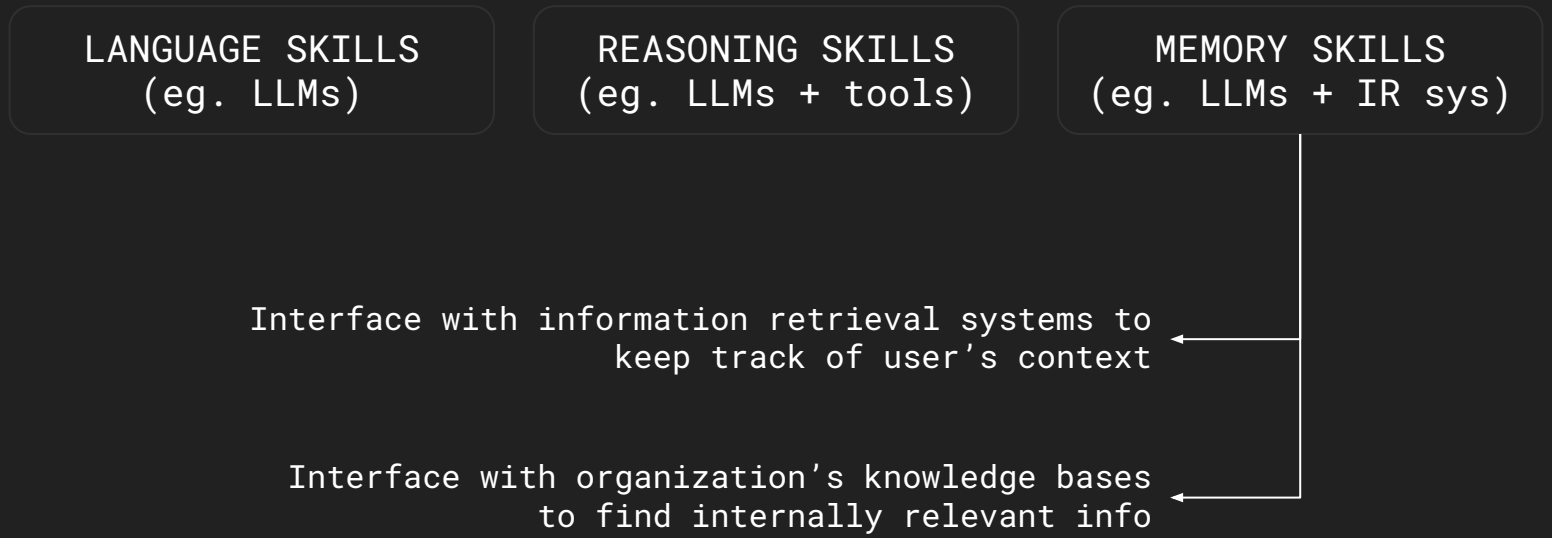




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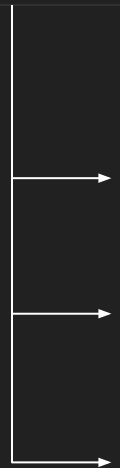

Turn user's instructions into a reasoning and action plan

Convert the plan into machine readable instructions (sql, api calls, etc)

Synthesize the output to provide information to the user

# AGGREGATE INTELLECT

Vague idea to Jupyter notebook in 15 minutes

Expert validation in days

Base implementation in weeks

Powered by LLMs, KG, …

Powered by global community of AI experts

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# KNOWLEDGE-OPS

\naa.luhj.aaps\ making sure no idea is too expensive to try

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