## Morning Session

- 9:00 – Opening remarks
- 9:15 – *What a Great Software Engineer Intern Host Looks Like* by Kir Chou
- 9:45 – *I ripped "Intro to Python Syntax" out of my Python Course, and I don't regret it* by Chelsea Troy
- 10:15 – *Online training: Wins and Fails* by Reuven Lerner
- 10:45 – Coffee/Tea/Snack/Stretch Break
- 11:00 – *The Importance of the Aha! Moment* by Kattni Rembor
- 11:30 – *Python for AI – How to Get Started* by Nisha Talagala
- 12:00 – Lunch Break

## Afternoon session

- 1:00 – Afternoon Welcome
- 1:15 – Extended Sessions
  - Work Session: *Making Sense of the Impact of AI on Teaching and Learning Python*
  - Tutorial: *Opportunities for citizen Eco learning & literacy using Python tools for Open Science*
  - Workshop: *Welcome to CircuitPython!*
  - Hands-On: *PyZombis: Creating a Massive Open Online & Serverless Course, Featuring PyGame & SQLite!*
- 3:00 – Lightning Talks
- 4:00 – Closing

Informal social events to follow

# What a Great Software Engineer Intern Host Looks Like

Kir Chou
PyCon US 2023 Education Summit

## Community

1st time in PyCon US!

7th year to speak in the community

Volunteer in PyCon Taiwan agenda team (talk reviewer, podcast content creator)

note35.github.io/about/

## Profession

CS Bachelor/Master

Software engineer living in Japan

## Intern & Intern host

3 **intern** exp in 3 companies during 2015, 2016, 2017

3 **intern hosts** exp in 2 companies during 2019, 2020, 2022

# Motivation

1) Present one kind of education happening **outside of the classroom**.

2) **Self-reflect** on what I did well and badly as an intern and an intern host.

3) **Share** my insights with the industry.

# An intern is **hired** and **matched** to a host and project(s).

Hiring and interviewing are out-of-scope.

Q:
What makes an intern host great?
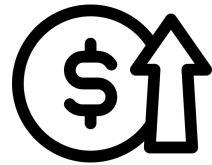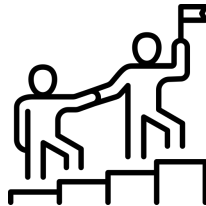
Q:
What makes an intern host great?

A:

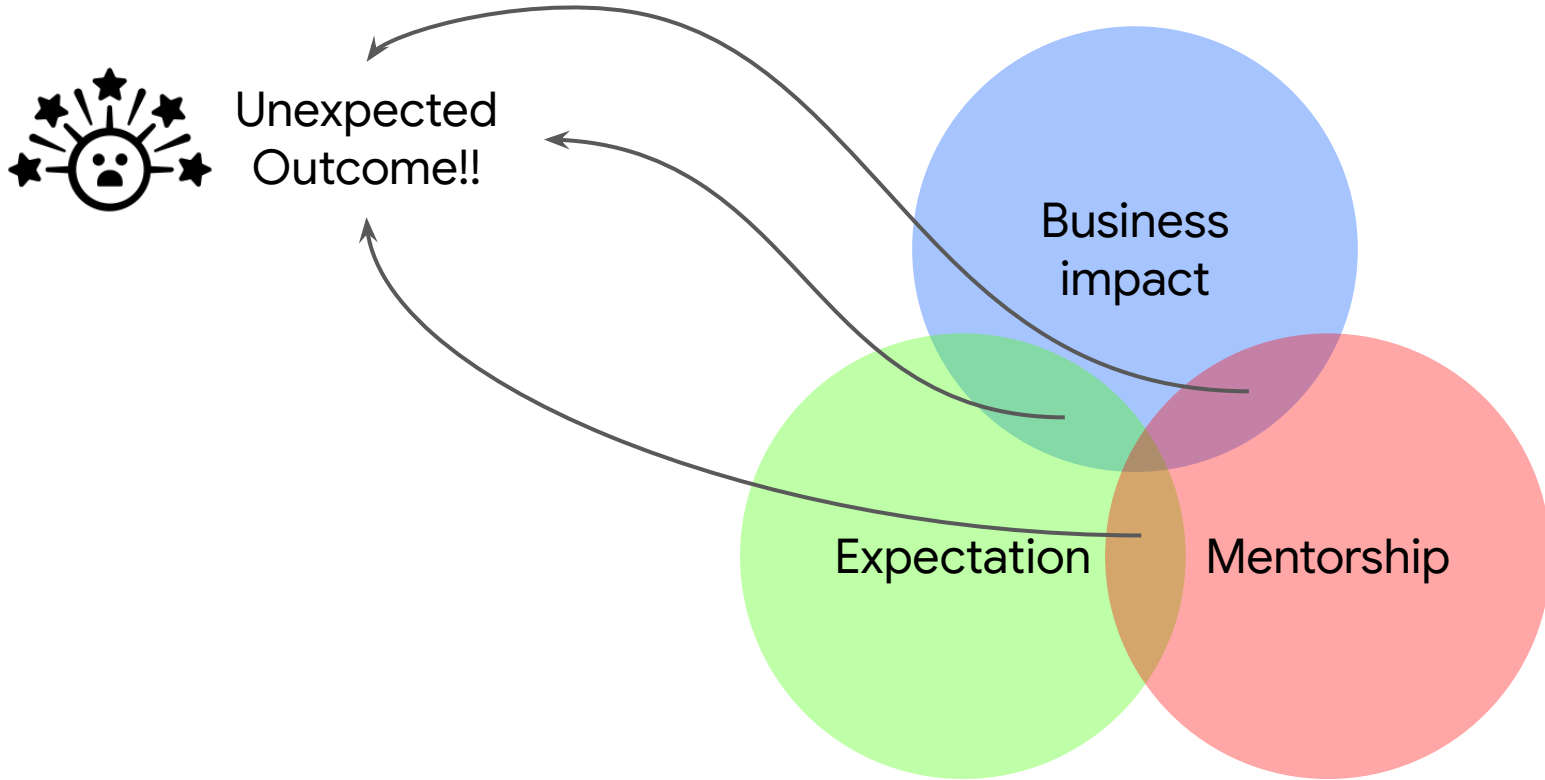A great host makes an intern deliver **a successful intern project**, so that benefits...

themselve's leadership skill

the intern's future career

value to the company

# Factors of a successful intern project.

Unexpected Outcome!!

Business impact

Expectation

Mentorship

# Why
# business impact?

An intern project doesn't need the business impact!

Intern's project hopes to have a **moderate business impact**.

If there's no business impact...

Wasted intern host time.

Demotivated interns.

Not enough information to make hiring decisions.

If a project has business impact, why full-time engineers don't work on them?



If some FTEs are available for it, please do NOT hire interns.

# **How** to design internship projects with **business impact**?
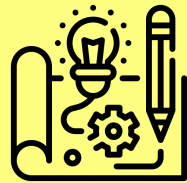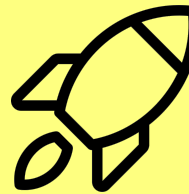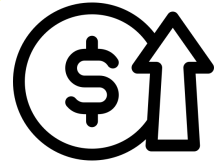
# The lifecycle of a project



Analysis

Experimentation

ideation

Productization

Business value

Prototyping

Launch

# Intern projects

| ideation | Analysis & Prototyping | Productization | Experimentation & Launch | |
|---|---|---|---|---|
| More ideas | Concept validation Demo ideas | Address tech debt (code migration, test coverage, and debug-ability)  Low priority tasks | Run experiments Tune parameters  Verify launch results | Business value |

# Intern project recommendations

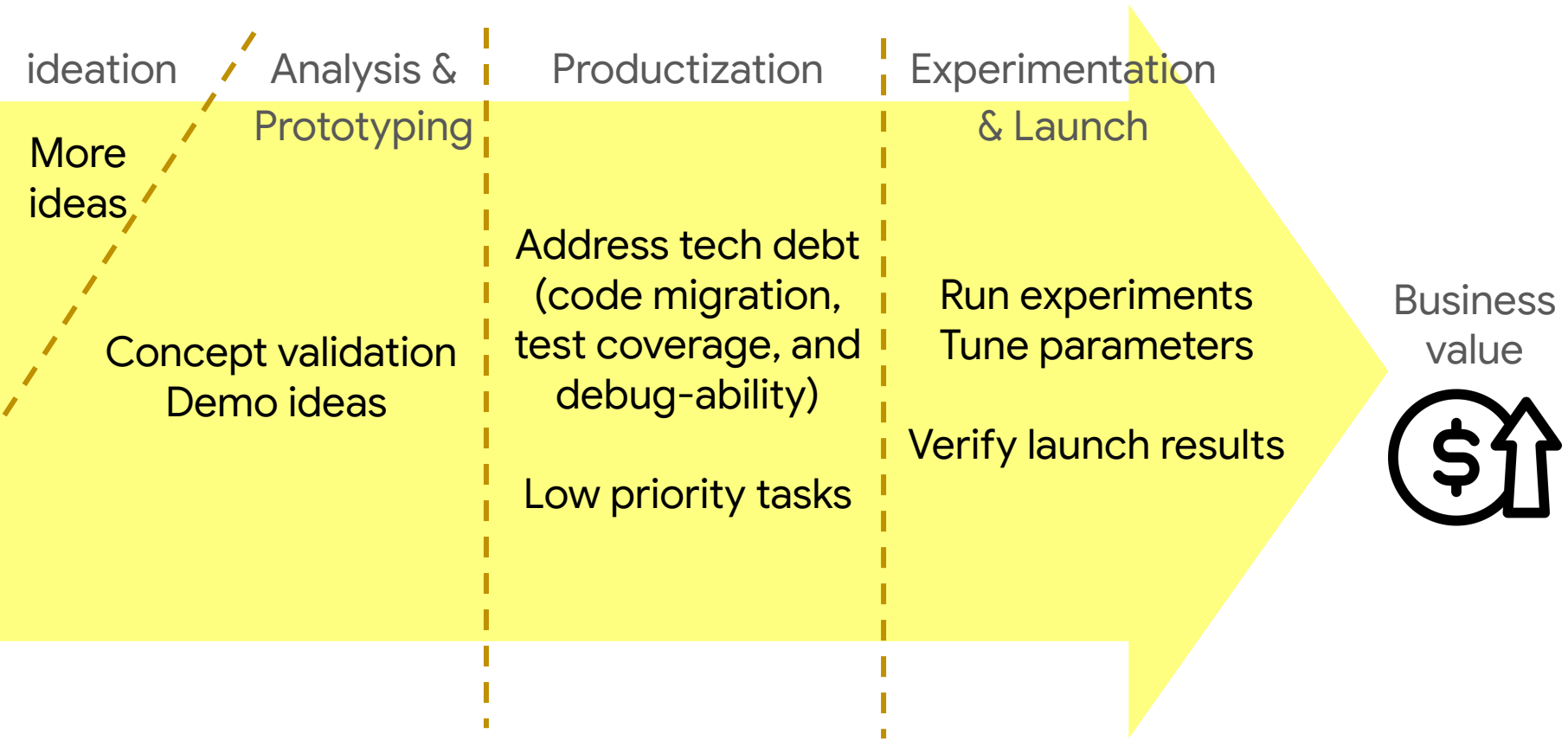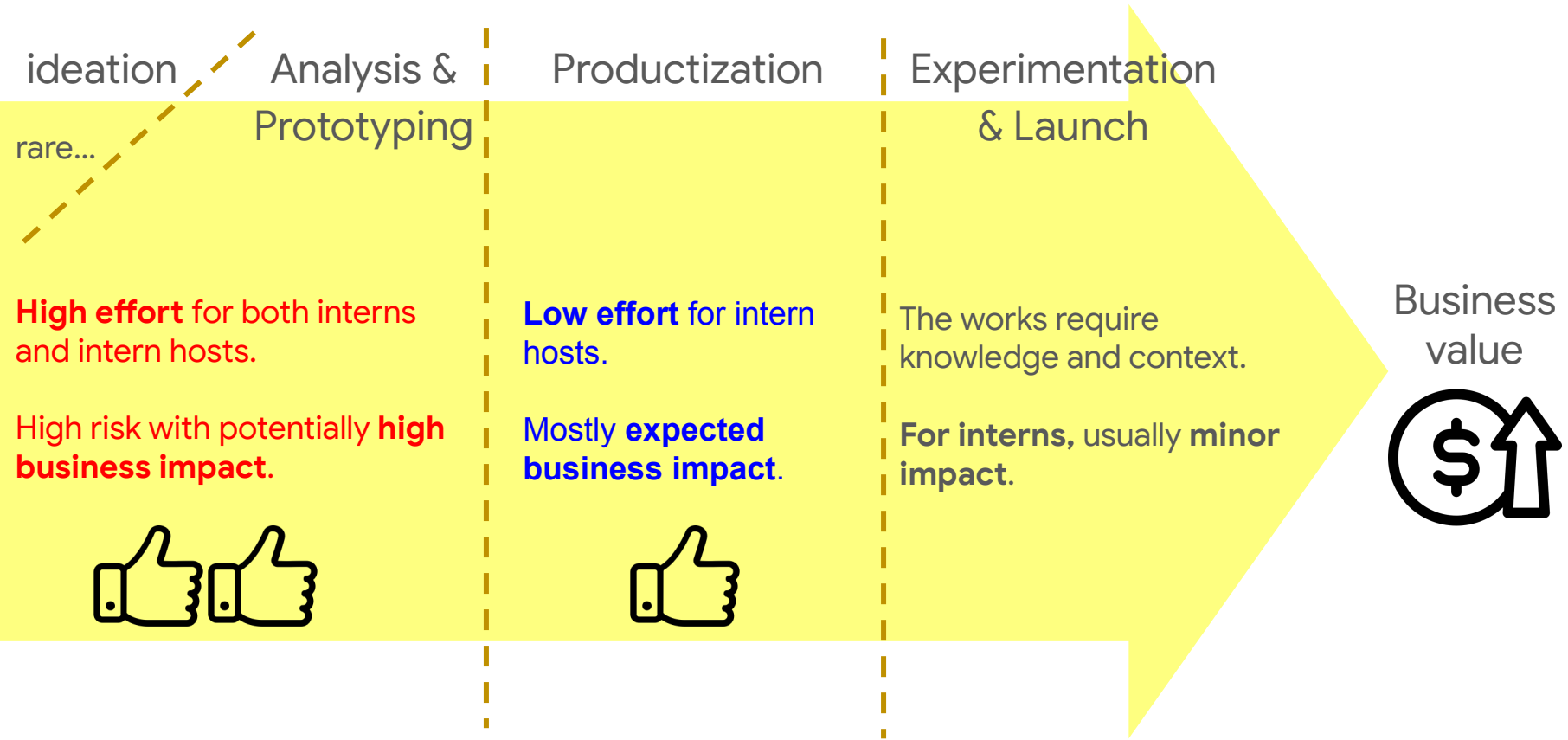| ideation | Analysis & Prototyping | Productization | Experimentation & Launch | Business value |
|---|---|---|---|---|

rare...

**High effort** for both interns and intern hosts.

High risk with potentially **high business impact**.

**Low effort** for intern hosts.

Mostly **expected business impact**.

The works require knowledge and context.

**For interns,** usually **minor impact**.

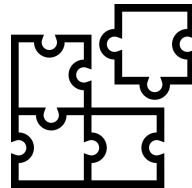# **When** to design internship projects with **business impact**?

Find tasks for interns after they are hired!

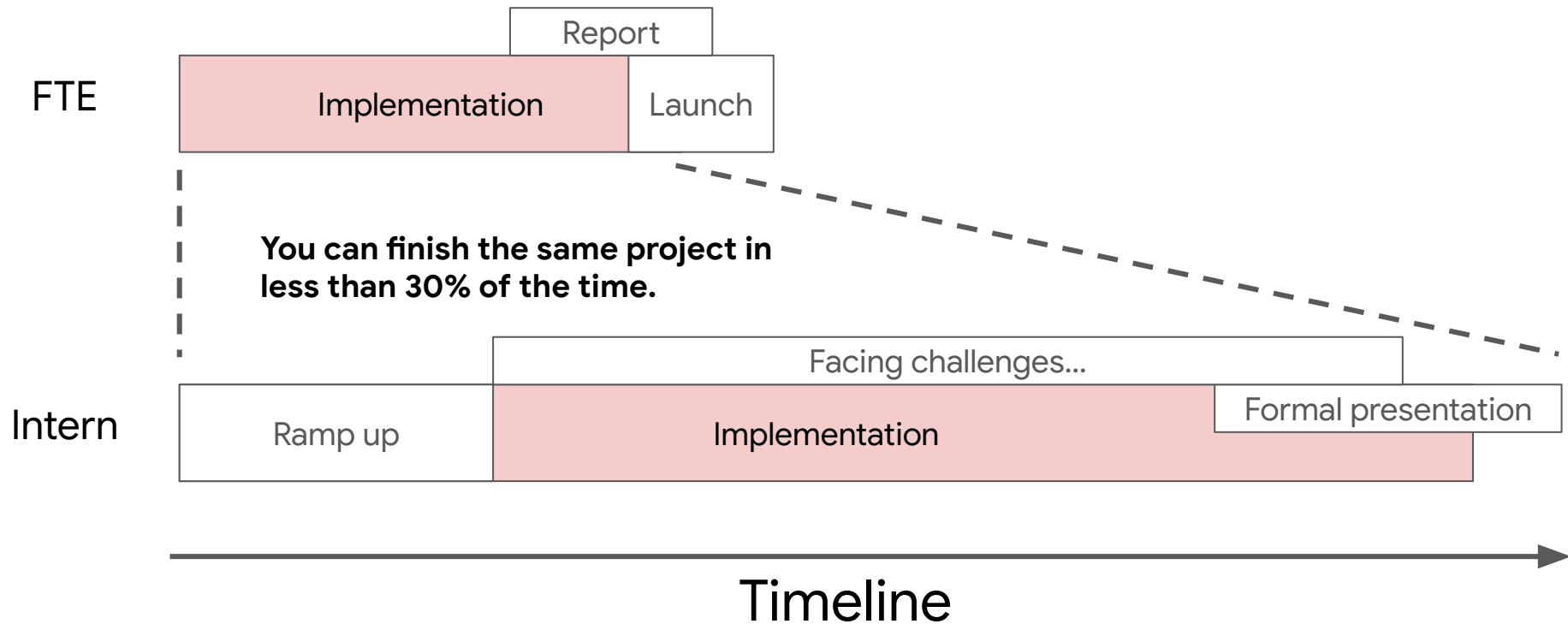Projects should be designed **before** the hiring process begins.

Otherwise...

Projects may not match intern's skills, interests, learning goals.

Interns are disrespected.

It takes time to review a new design doc.

# Expectation

Goal: a well-defined and measurable project.

# Project size



FTE

Report

Implementation | Launch

**You can finish the same project in less than 30% of the time.**

Intern

Facing challenges...
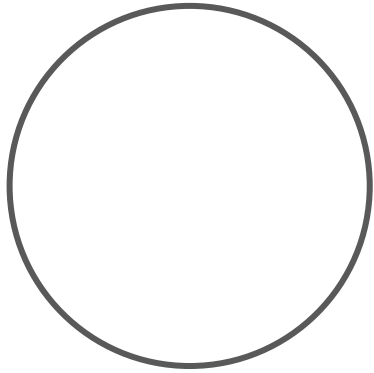
Ramp up | Implementation | Formal presentation

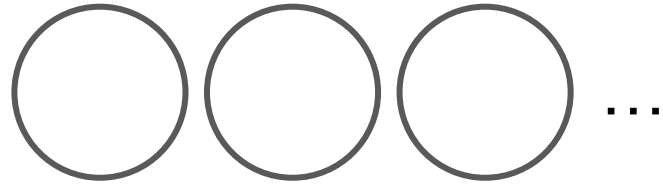Timeline

Should we prepare one or more projects for an intern?

Prepare many projects if possible.
Pick one matched project ideally.

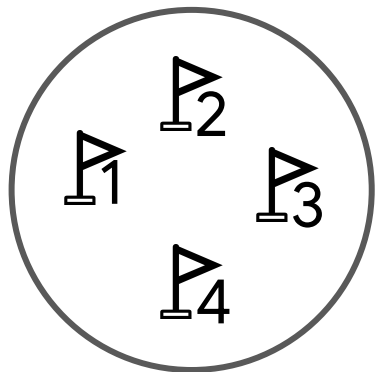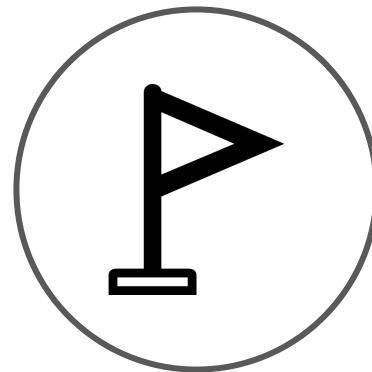> **One project**   **>**   **Many small projects**  …

# One vs Many

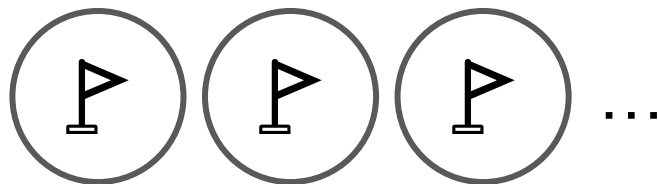**One project with checkpoints**

**>**

**One big project without any checkpoints**

**Many small projects**

Hiring decisions need to be made based on
1) the business impact
2) culture fit.

Hiring decisions should be made based on a well-defined project's expectations per task. *(Culture fit can be part of them.)*

Otherwise, evaluation is a black box...

Interns may lose their way.

What's wrong? Should I get feedback from my host, what to get?
How to improve myself?

# Motivation

Goal: a great mentorship to motivate interns to grow.

Regular 1-on-1

Project status check-in

Adequate technical support

Mental status

Feedbacks

Dive too deep
v.s.
Ask without thinking

Very important but
often no mentioned

## Regular 1-on-1

Project status check-in

Adequate technical support

Mental status

Feedbacks

## Find the gaps

Questions asking

Communication
(code commit, document)

Learn programming
languages

Write unit tests

Coding guidelines

Design doc

Presentation

# Weekly discussion

Hardskills

Softskills

# Find the gaps

Questions asking

Communication
(code commit, document)

Learn programming
languages

Write unit tests

Coding guidelines

Design doc

Presentation

## Regular 1-on-1

Project status check-in

Adequate technical support

Mental status

Feedbacks

## Weekly discussion

I am not CS major...
I don't have master...

What are other teams
doing?

What's the equivalent
solution in public?

Hardskills

Softskills

Perceptions

Industry knowledges

# Find the gaps and topics

Questions asking

Communication
(code commit, document)

Equivalent open source
technologies

Learn programming
languages

Write unit tests

Coding guidelines

Design doc

Presentation
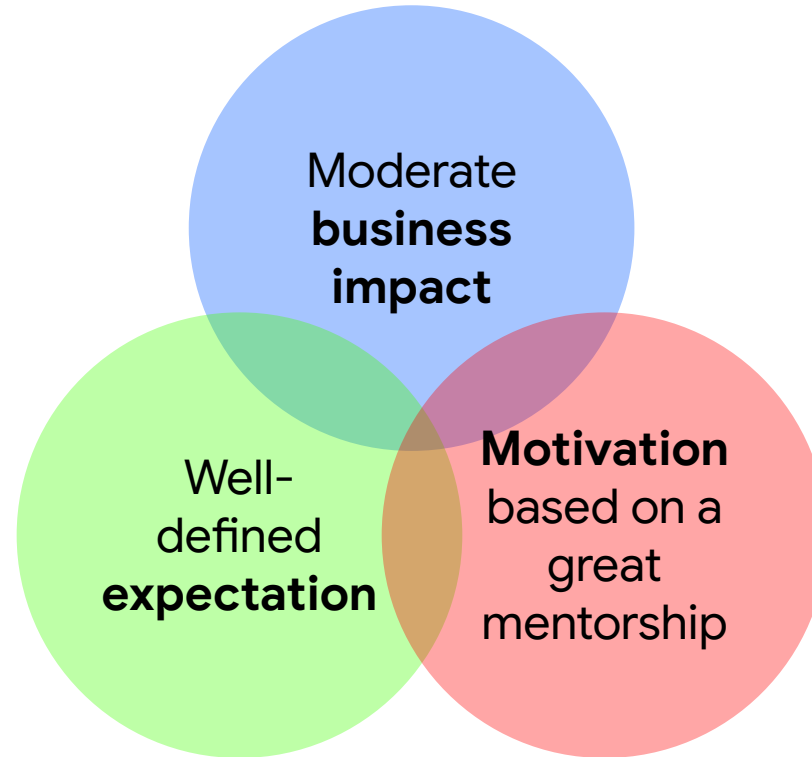
Interview preparation

...

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# A great mentorship motivates the interns to...

- grow the intern's **long-term productivity**.
- grow the intern's **vision about their future career**.

# Takeaways

A great host can delive a successful project based on the following factors.

Moderate **business impact**

Well-defined **expectation**

**Motivation** based on a great mentorship

# Thank you!