

NUS Hackers Tech Internship Talk

by  **NUS
HACKERS**

(some useful Telegram groups)



Project Intern

<https://t.me/projectintern>

Ask anything about
tech internships and
new grad jobs in
Singapore and/or
overseas!



NUS Hackers

<https://t.me/nushackers>

Be notified of our
events and discuss
cool hacker/tech stuff!

Agenda

7.05 - 7.45 Internships: what, why and how

7.45 - 7.50 5 mins break

7.50 - 9.00 Panel Discussion

Today's philosophy

High level idea of how to prepare for internships

We're not going to go into the nitty gritty. Lots of resources here, come back and revisit those hyperlinks when you have the time

Post questions there



**Why do an
internship?**

Meet new people

Explore the world

\$ and other perks

Graduation Requirement

Real world experience: Theory → Practice

Find out what you like

Graduation Requirement

Industry Experience Requirement

The industry experience courses are as follows:

1. A 6-month internship through CP3880 Advanced Technology Attachment Programme (12 units), IS4010 Industry Internship Programme (12 units), or ETP3201L Innovation & Enterprise Internship (12 units);
2. A 3-month internships through one of the followings: CP3200 Internship (6 units), CP3202 Internship II (6 units), CP3107 Computing for Voluntary Welfare Organisations (6 units), CP3110 Computing for Voluntary Welfare Organisations II (6 units), ETP3205 Innovation & Enterprise Internship (6 units);
3. Other forms of industry experience approved by the Department of Computer Science. Certain NOC internships are not CP-coded, but also can be used to satisfy Breadth-and-Depth requirements as if they were CP-coded.

Students who aim for Honours (Highest Distinction) must pass the CP4101 BComp Dissertation. Students with GPA of 4.00 or higher after completing at least 70% (i.e. 112 units) of the total unit requirement for the degree programme may opt to replace the Industry Experience Requirement by CP4101 B.Comp Dissertation (12 units). Note that the CP4101 project selection process takes place one semester ahead of the semester in which the students commence CP4101. Thus the students can tentatively select CP4101 projects; but the condition “GPA of 4.00 or higher after completing at least 70% (112 units) of the total unit requirement for the degree programme” must be satisfied before they can commence CP4101 in lieu of Industry Experience Requirement.

Real world experience: Theory → Practice

YouTube

Layout Explorer
34,904 views

2.1K 17 Share Save Report

Flutter
226K subscribers **SUBSCRIBE**

Published on Aug 17, 2020
The Layout Explorer visualizes how Flex widgets and their children are laid out. Albertus Angga, Flutter Software Engineering Intern, shares the top 3 ways you can use Layout Explorer to debug layout issues while building your app.

Using the Layout Explorer → <https://goo.gle/30VsQlw>

Learn everything about Flutter at → <https://flutter.dev>
Subscribe! → <https://goo.gle/Flutter>

asana blog

INTERN PROGRAM

What our interns built this summer: Meet our 2019 intern class

By [Steven Rybicki](#) Oct 11, 2019 0



Every summer, we have a class of interns join our engineering team. They work on important and impactful projects, contribute to feature launches, site stability and making the codebase a more pleasant place to develop in. This year we had our largest class yet: 25 interns across engineering, data engineering, and data science teams.

As is our now [yearly tradition](#), I caught up with some of our

[f](#) [t](#) [in](#) [e](#) [Subscribe](#)

facebook / react

Code Issues 459 Pull requests 111 Action


[Jump to bottom](#)

Import React Concurrent Mode Profiler #19634

bvaughn merged 131 commits into [facebook:master](#) from [MLH-Fellowship:scheduling-profil...](#) Aug 20, 2020

Merged

Conversation 60 Commits 131 Files changed

 **taneliang** opened this pull request 9 days ago • edited 9 days ago

Labels
CLA Signed

Linked issues
Import this project into React repo packages

Summary

This PR imports the concurrent mode profiler [project](#) into `packages/react-devtools-scheduling-profiler`, with history 🌈

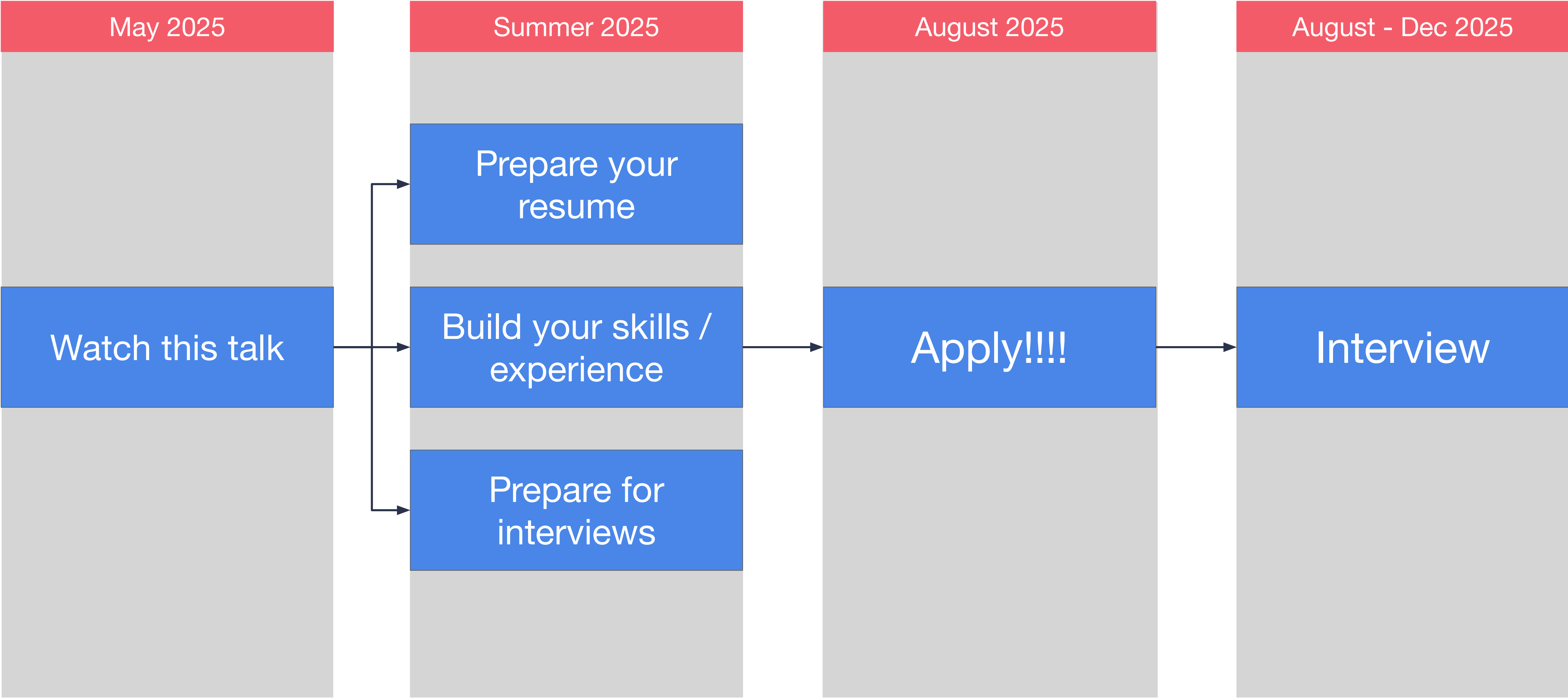
Find out what you like

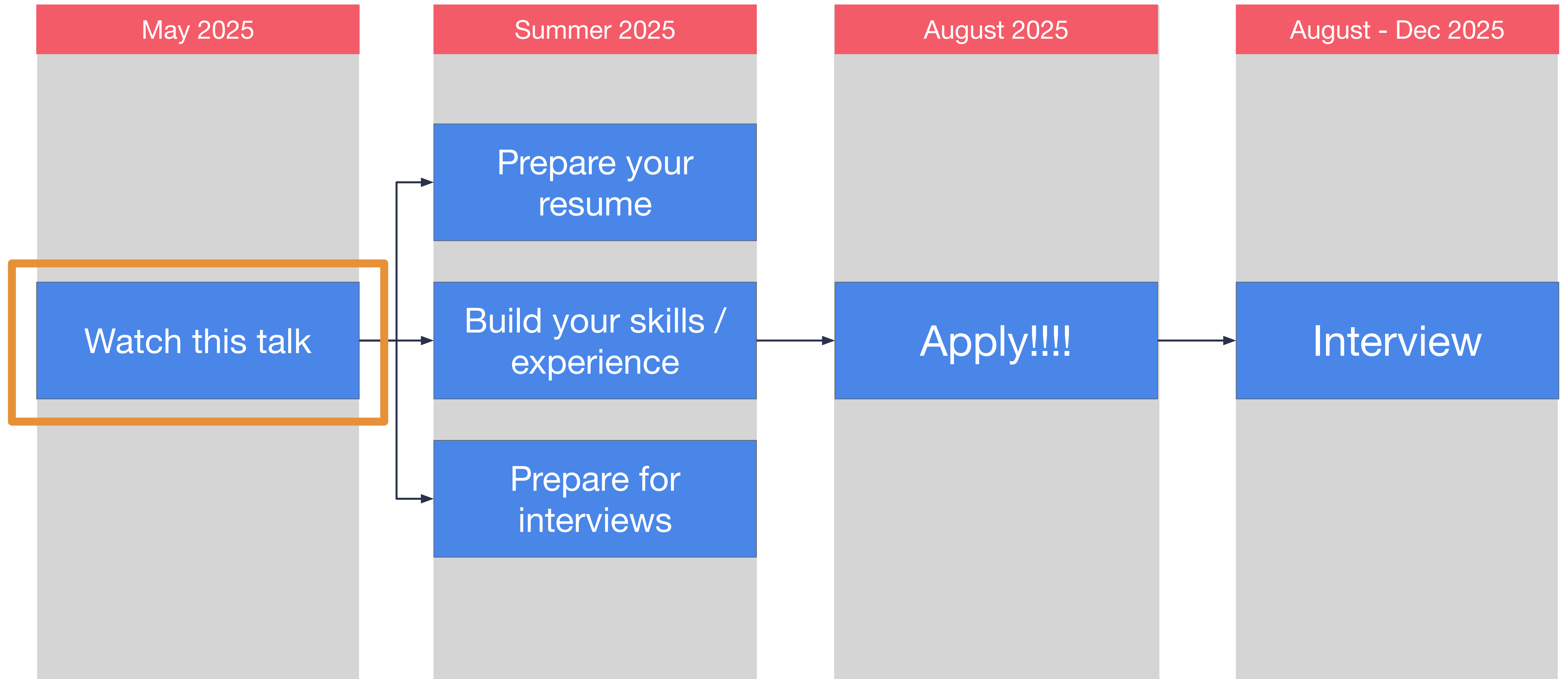
Company scale: Startup vs Big Tech

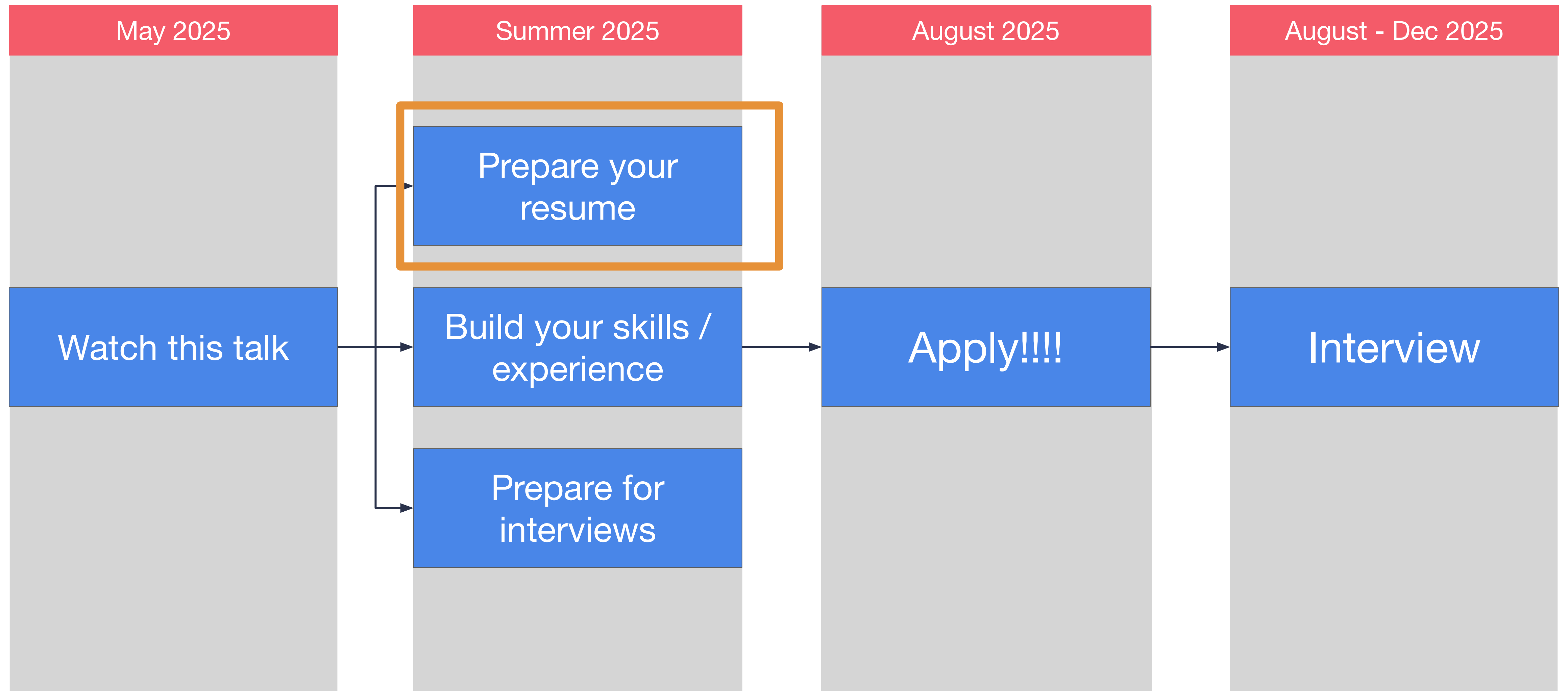
Company purpose: Product vs Consultancy vs Quant

Nature of role: Frontend? Backend? Product Engineering?
Product Management? Data Engineering? Infra?

What's the process?









Prepare your resume

Resume

Resume writing resources

- <https://www.techinterviewhandbook.org/resume/>
- <https://luyangkenneth.github.io/evolution-of-resumes/>
- <https://www.reddit.com/r/EngineeringResumes/wiki/>

Resume Templates

- <https://github.com/posquit0/Awesome-CV>
- <https://github.com/deedy/Deedy-Resume>
- <https://github.com/jakegut/resume>
- Maybe learn to do it in LaTeX

Resume

Key guidelines

- Keep it to 1 page
- Put in everything you can think of, even if it's "lame"
 - Everyone starts somewhere; curate when you have more experience
- Showcase your strengths through YOUR contributions in each section
- Make sure you can talk about what's on your resume! A good conversation is how you show your talent, ability and passion

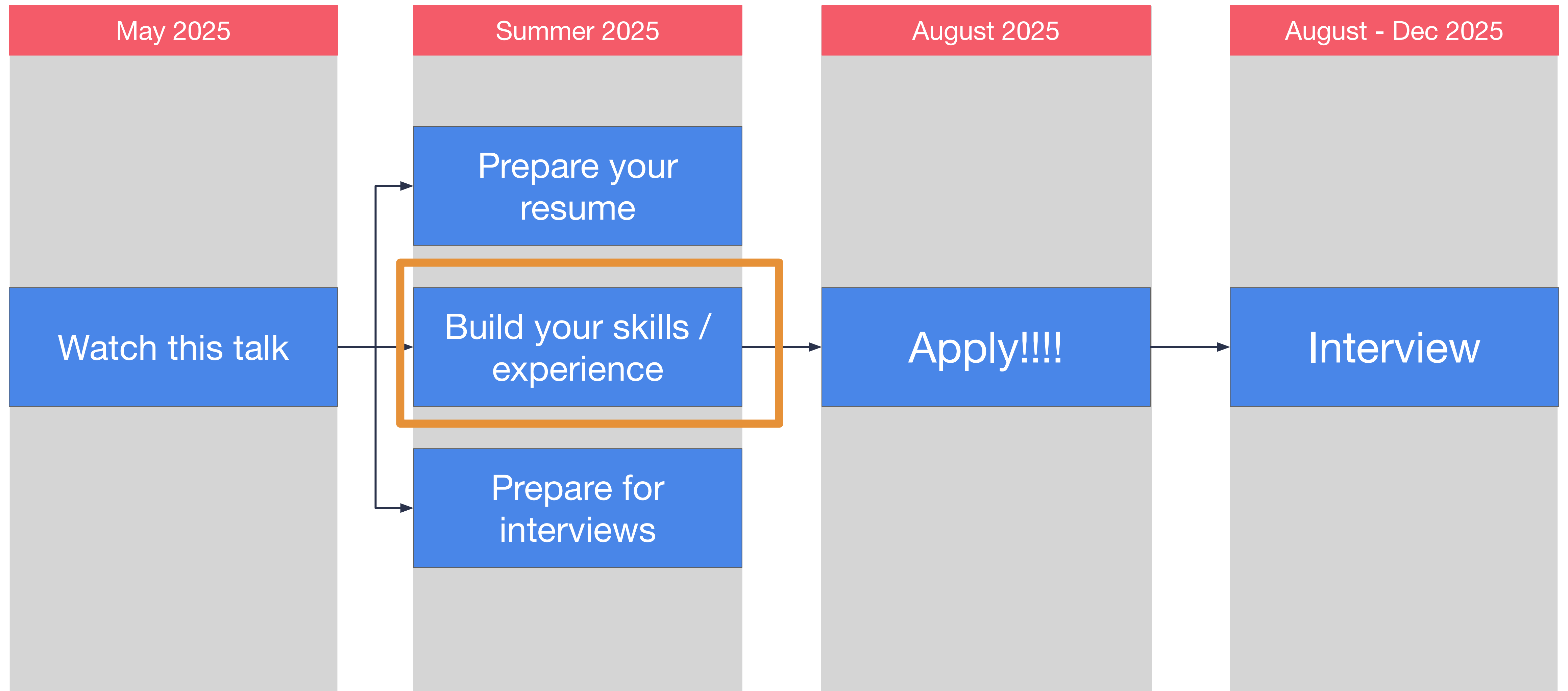
Resume

Getting feedback

- Use platforms like [Resume Review Portal](#) (from Tech Interview Handbook)
- Get your friends to look over it
- Send a courteous message to the Project Intern chat

“Hey everyone! I recently updated my resume and was hoping to get some feedback. I am interested in applying for X roles. Please react to this message if you don’t mind sharing your thoughts on it. Thank you!”

 What if I have
nothing to put?



Personal Projects

What do I build?

- Just build something!
- Can be:
 - Solutions to problems you or others face
 - Build-your-own-x:
<https://github.com/danistefanovic/build-your-own-x>
 - Contributing to Open Source
 - Youtube Tutorials
 - Technical writing*

Personal Projects

Solution to a problem you face

Transcribe YouTube Videos

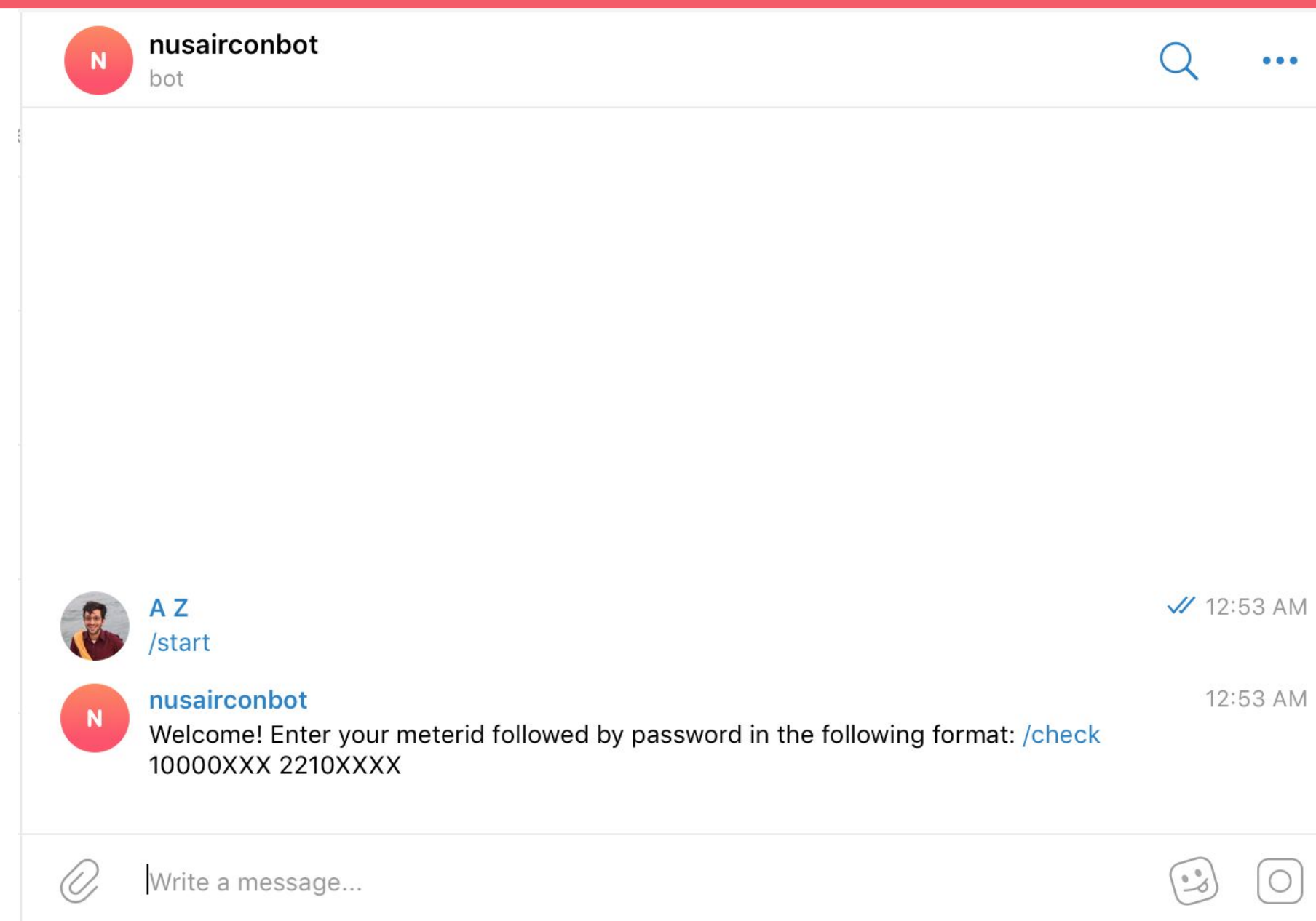
Q Enter YouTube URL

Surprise me

<https://scribr.vercel.app/>

Personal Projects

Solution to a problem you face



Telegram bot to check aircon credits

Personal Projects

Technical Writing

Abstract

- A `Network Protocol` that resolves `IP Address` to `MAC Address`

🔗 Why do we need Address Resolution Protocol?

We need `MAC Address` in order to **route the data** from **one machine to another** on `Local Area Network (LAN)`.

Only IPs in your local subnet get resolved to MACs. Everything else routes via the gateway MAC.

When accessing external IPs (like `8.8.8.8`):

1. Machine checks the subnet → sees `8.8.8.8` is not local
2. Uses ARP only to get the MAC of the gateway
3. Routes the packet to the `default gateway`

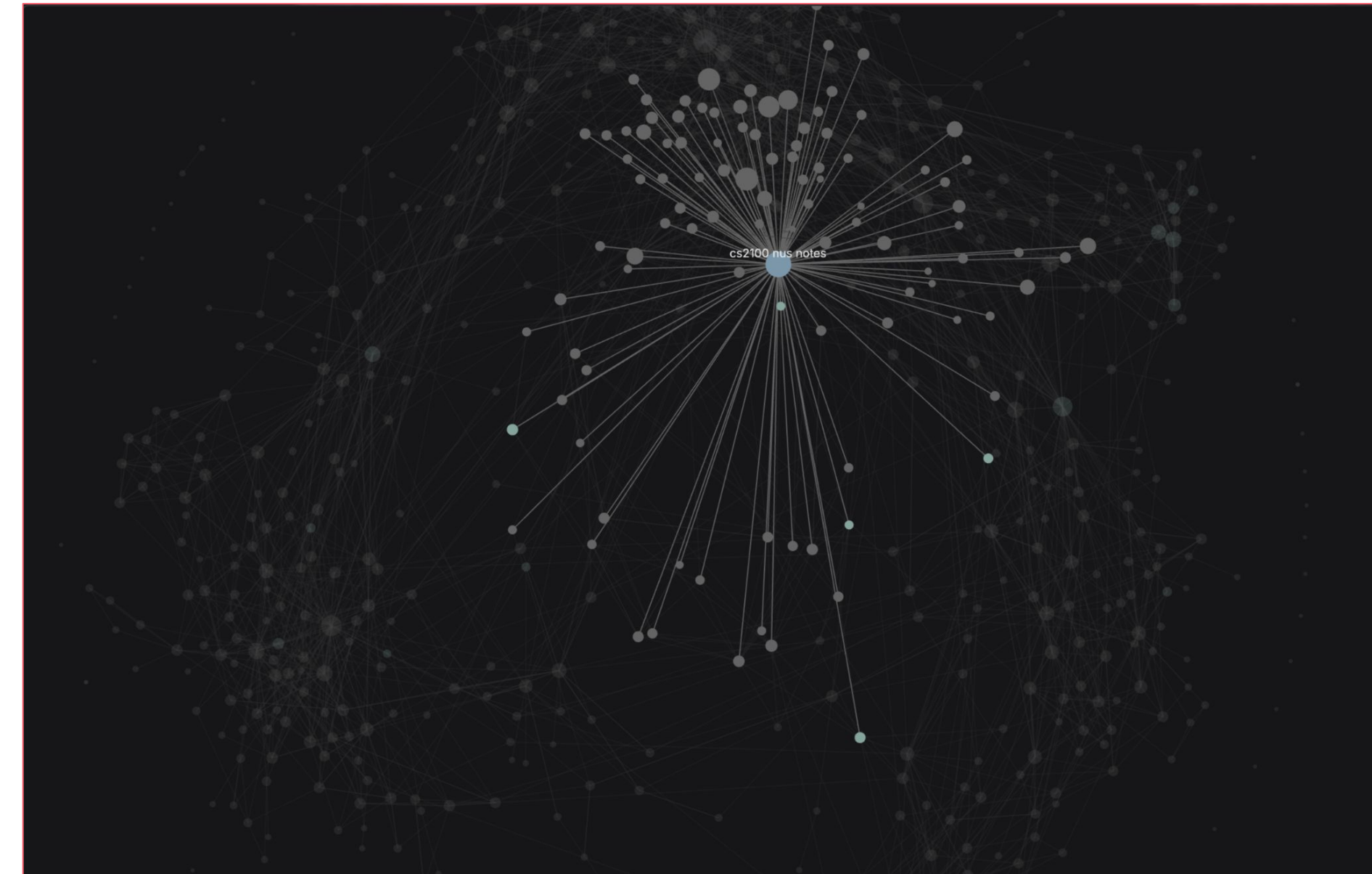
ARP Cache

- ARP Cache is a mapping of `IP Address` and `MAC Address` stored in the computer to reduce the frequency of querying the MAC address of other machines

🔗 Commands to view ARP cache

You can view this copy using `arp -a` or `Linux` specific command `ip neighbor show`.

A sample cache entry look like → `? (172.31.20.1) at 0:0:5e:0:1:d6 on en0`.



<https://notes.yxy.ninja>

Personal Projects

Open Source !



Google
Summer of Code

Personal Projects

What if I don't know how to build anything?



THE ODIN PROJECT



HACKER
SCHOOL

Personal Projects

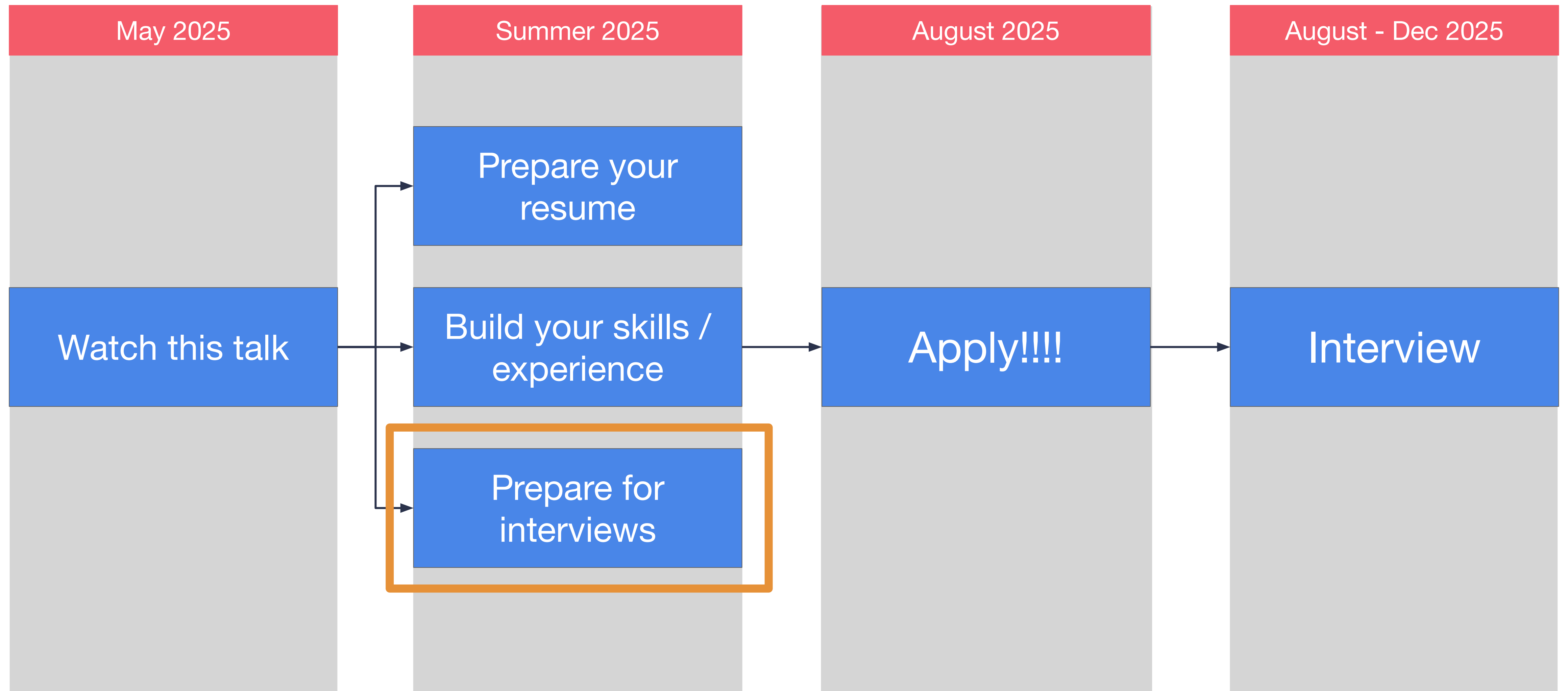
Other areas to cultivate an interest

- Machine Learning: Kaggle (<https://www.kaggle.com>)
- Competitive programming: Codeforces (<https://codeforces.com>)
- Security: CTF competitions (<https://ctftime.org/>)

Cover Letter

Do you need one?

- Unless mentioned in the application its not necessary
- A good cover letter is unique and personalised, it takes a lot of effort
 - If it's not required, it's a lot of time and effort and you may want to avoid doing it
- Personal opinion of what an [effective cover letter could look like](#)





Prepare for interviews

Interview Prep

Technical interviews

- Usually algorithmic questions
 - Can either be live-coding / whiteboarding
- Useful guides:
 - techinterviewhandbook.org/coding-interview-prep/
 - [Asana Technical Interview Guide](#)
 - [Jia Hao's Technical Interview Study Guide](#)

Interview Prep

Other types of technical interviews

- System Design ([guide](#))
- Implementation / Live-Coding
- Bug Hunting
- Take Home Assignment
- Tech Fundamentals
 - CS trivia questions on different computer science topics (i.e networking, operating systems)
 - [What happens when you enter a URL into your browser?](#)

Interview Prep

General Philosophy

- Practice, practice, practice!!!
- Do leetcode questions consistently, even just 2-3 every weekend is enough
- Do mock interviews with friends
- Don't avoid difficult questions. If you get stuck, look at the solution to learn quickly and then move on. Don't waste time being stuck

Interview Prep

It gets easier...

- This entire process is...exhausting. But it's important if you want to get into tech
- It also gets easier as you do more

Interview Prep

Resume deep-dives

- Re-read your resume
- Recall things you did and engineering decisions you made
- Prepare concise summaries of your work

Interview Prep

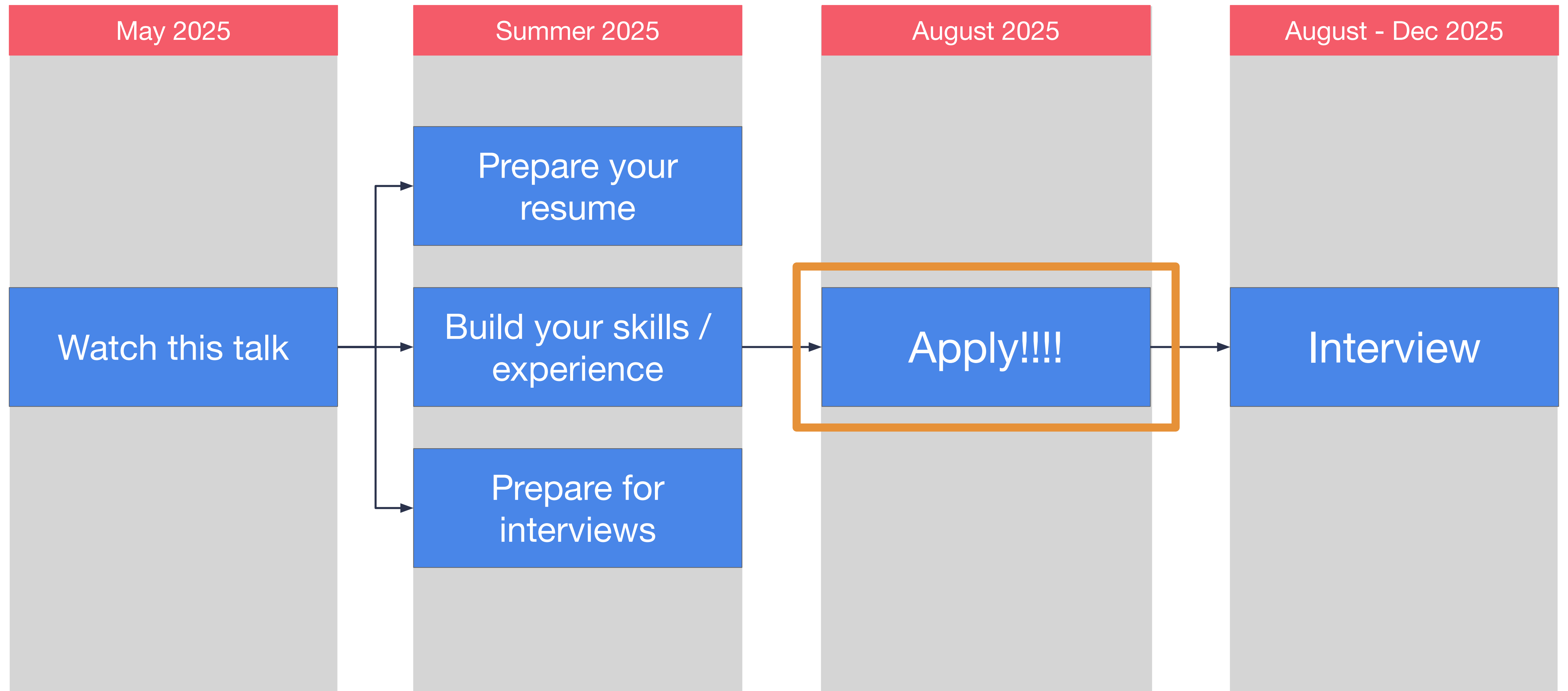
Behavioural round

- STAR format: Situation, Task, Action, Result
- [How to answer the 64 toughest interview questions](#)
- techinterviewhandbook.org/behavioral-interview-questions
- Additional tips for [behavioral interviews](#)
- Recall your previous involvements, prepare anecdotes

That's a lot of stuff.

**Take it one step at a
time.**

**The best time to
start is now.**



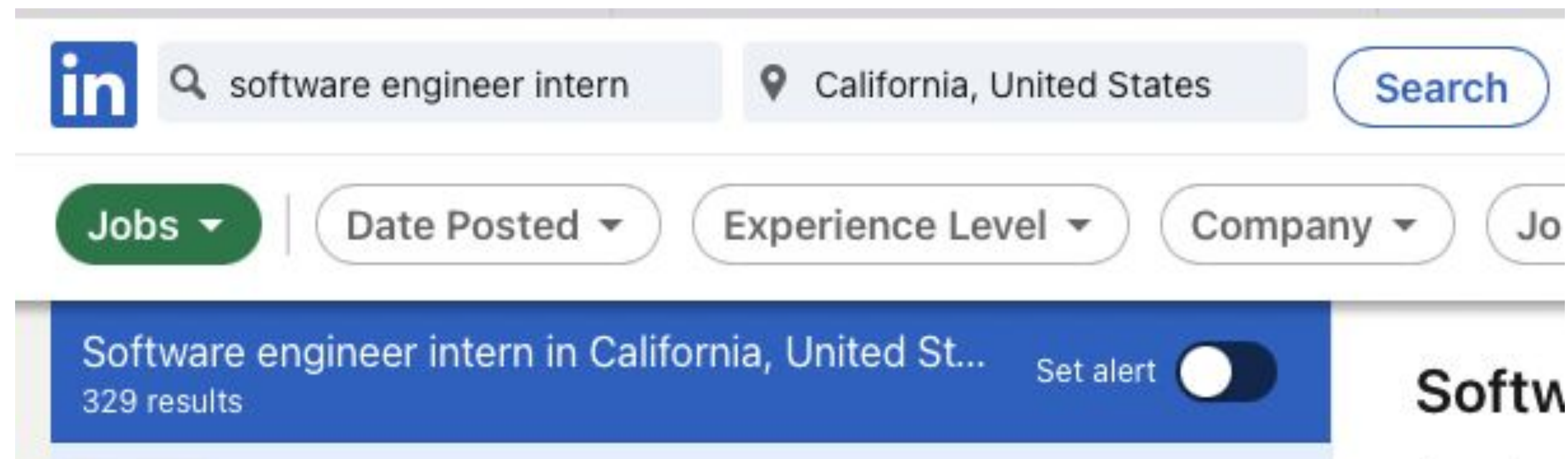
Applying for Internships

- Internship applications are usually very easy
 - Enter contact details
 - Upload resume
- Apply on company websites

Where to find internships?

Job Aggregators

- LinkedIn Job Alerts: Search for “Software engineer intern”, set a location, save as job alert
- [Untapped](#), [Simplify](#), [cscareers.dev](#), [RippleMatch](#), [SG tech companies](#)



Where to find internships?

Career Fairs & Events

- SoC regularly organizes [career fairs](#)
- SoC and [CFG](#) also hold many ad-hoc events
- Hackathons and similar events usually have sponsor booths with company reps ready to talk about opportunities

Where to find internships?

Natural Proximity

- Startups? Find a VC firm, look up their portfolio companies
 - Also may have events / programmes e.g.: Greylock Techfair, 8VC Fellowship, Kleiner Perkins Fellowship
 - Find what companies are housed at incubators e.g.: Block71
- Research-adjacent? CS Research Conferences have sponsors
 - [ACM Conferences](#), [Conferences by Impact Factor](#)

Where to find internships?

Your Life

- Unlock your phone
- Look at every app you have. Every email you receive. Every service you use.
- Google `f"{appname} internship"`
 - e.g: spotify internship

robinhood internship



[All](#) [News](#) [Images](#) [Videos](#) [Maps](#) [More](#) [Tools](#)

About 1,200,000 results (0.47 seconds)

<https://careers.robinhood.com>

Robinhood Careers - Transform the Future of Finance

At **Robinhood**, we believe that our financial markets should be accessible to everyone. We're leveling the playing field by making trading more intuitive, ...

<https://earlytalent.robinhood.com>

Robinhood Careers - Fresh Perspectives, Fresh Ideas

We host **internships** during the Winter (January - April), Summer (May - September), and Fall (September - December), and we hire new grads throughout the year.

Join Our Team

Filter by:

EARLY TALENT

All locations

Search

EARLY TALENT



Android Engineer (Intern)

Menlo Park, CA

External Affairs - Part-Time Fall Intern (2022)

Remote

Apply for this Job

* Required

First Name *

Xiao

Last Name *

Ming

Email *

xiaoming@u.nus.edu

Phone *

99998888

Location (City) *

Singapore

[Locate me](#)

Resume/CV * [Application form expired. Please refresh the page and try again.](#)

Cover Letter [Attach](#), [Dropbox](#), [Google Drive](#), [Paste](#)

School *

National University of Singapore (NUS)

Degree *

Bachelor's Degree

Start Date *

08

2020

End Date *

06

2024

[+ Add Another Education](#)

LinkedIn Profile *

<https://www.linkedin.com/in/xiao-ming/>

Where to find *experience*?

SOC can help

- [OSS projects at SoC](#)
- Computing for Voluntary Welfare Organisations ([CVWO](#))
- [Orbital](#)
- NUS Enterprise Startups
- [NUS Overseas Colleges](#)
- [NUS Venture Initiation Programme](#)

Referrals

- Referrals help, but they're not a must
- Don't be shy to ask seniors, at most they say no
- Usually gets you through the resume screen, so *at least* you get an OA or interview

Rejections



Hi Woo,

Thank you for your interest in a career at [redacted]. Unfortunately, we will not be moving forward with your candidacy for the position of Software Engineering: Intern Opportunities for University Students, [redacted]k

Hi Jiahao,

Thank you for taking the time to apply for the [redacted] 2024 Intern - Software Engineer role.

We're fortunate to have received a lot of interest in this role, resulting in a very competitive selection process and at this time we have decided not to move forward with your application.

While it didn't work out this time, we hope you will continue to explore other opportunities with us by visiting our [redacted] website.

Thank you once again for your interest in [redacted] and we wish you all the best in your search for a suitable position.

** Please note: This email is sent from an unattended mailbox, please do not reply to this email.*

Kind Regards,

[redacted]
Unfortunately, after much consideration, we are not able to offer you an interview at this time. However, we will be in touch with you again the next time we connect. We invite you to keep in touch with [redacted] and check back periodically throughout the course of your career in case a position of better fit arises.

Our list of available opportunities can be found by visiting: [redacted]
We sincerely appreciate your interest [redacted] and wish you much success in the future.
All the best,
[redacted]

Hi Jia Hao,

Thank you for your interest in [redacted] and for taking the time to apply for our 2024 Software Engineering Intern position. We're sorry for the delay in following up on your application.

Unfortunately, we have decided not to move forward with your candidacy at this time.

Please keep an eye on our [careers page](#) for new opportunities as [redacted] continues to grow—we will be opening more Early Talent positions that might align with your experience next fall.

We wish you all the best with your current job search!

Best regards,
The [redacted] Recruiting Team

Dear Jia Ming,

Thank you for your interest in the Technology Summer Internship (May 24 - Aug 24) position. We've reviewed your background and experience and **unfortunately**, we have decided to move ahead with other candidates. With that said, we encourage you to join our Early Careers Talent Community: [redacted] to receive updates about future opportunities and insights into [redacted]

Throughout the recruiting season we will continue to refresh open roles and add new opportunities, so we encourage you to regularly explore the Early Careers page on [redacted] and apply to roles that match your interests and skillsets. Good luck to you in your search and we hope to be in touch again in the future.

Best,

Dear Applicant,

Thanks you so much for your interest in [redacted]

Our team has reviewed your resume and based on the skill set we're looking for, we **unfortunately** have decided not to proceed with your candidacy for the Developer Internship position.

Thanks again for your interest in Virtu [redacted]ish you the best of luck in your search.

Regards,
[redacted] Financial Recruiting

Applying

Rejections

**Everyone struggles.
A lot.**

**You only need 1
offer.**

Skill + Luck = Offer

A rejection is not reflective of your worth as an engineer.

All it means is that things didn't go right for that interview/company.

It's a bar, not a race.

An offer!



Maximizing your internship experience

General tips

- Dogfooding (poking around the product as if you're an end user)
- Take notes about how systems work
- Talk to your colleagues and supervisors
- Engage with the codebase actively
- Think about the business impact
- Build relationships
- Ask for feedback FREQUENTLY (1:1 review sessions, weekly catchups etc.)

Alternatives

Your own project/startup

Undergraduate Research

Open Source (eg. Google Summer of Code)

Take some time to relax and breathe

Parting thoughts

Parting thoughts

- This process is extremely emotionally exhausting and tiring
- Your friends are going through it with you. Talk to them. Help each other out. Ask questions in places like the Project Intern Telegram group 😊
- Remember: You only need one offer
- There's no such thing as "not being prepared enough". Every position you don't apply to is a definite rejection. Preparation involves accumulating learnings, and every failed interview is a learning experience
- Opportunity is when luck meets preparation



5 mins Break



Panellist Intro

Azeem

Hi! I joined NUS CS from Poly and graduated in 2023.

I have previously interned at Accenture, GovTech, Shopee and Stripe. I've really enjoyed product facing work and that's what I did in my internships.

I'm currently a full time engineer at Stripe, happily working on product engineering too!



Johanna

Hi I'm Johanna, currently working as SWE in Google for ~3 years.

Previously, I went for NOC SEA, ATAP + part-time in Rakuten Viki, and summer internship in Google.

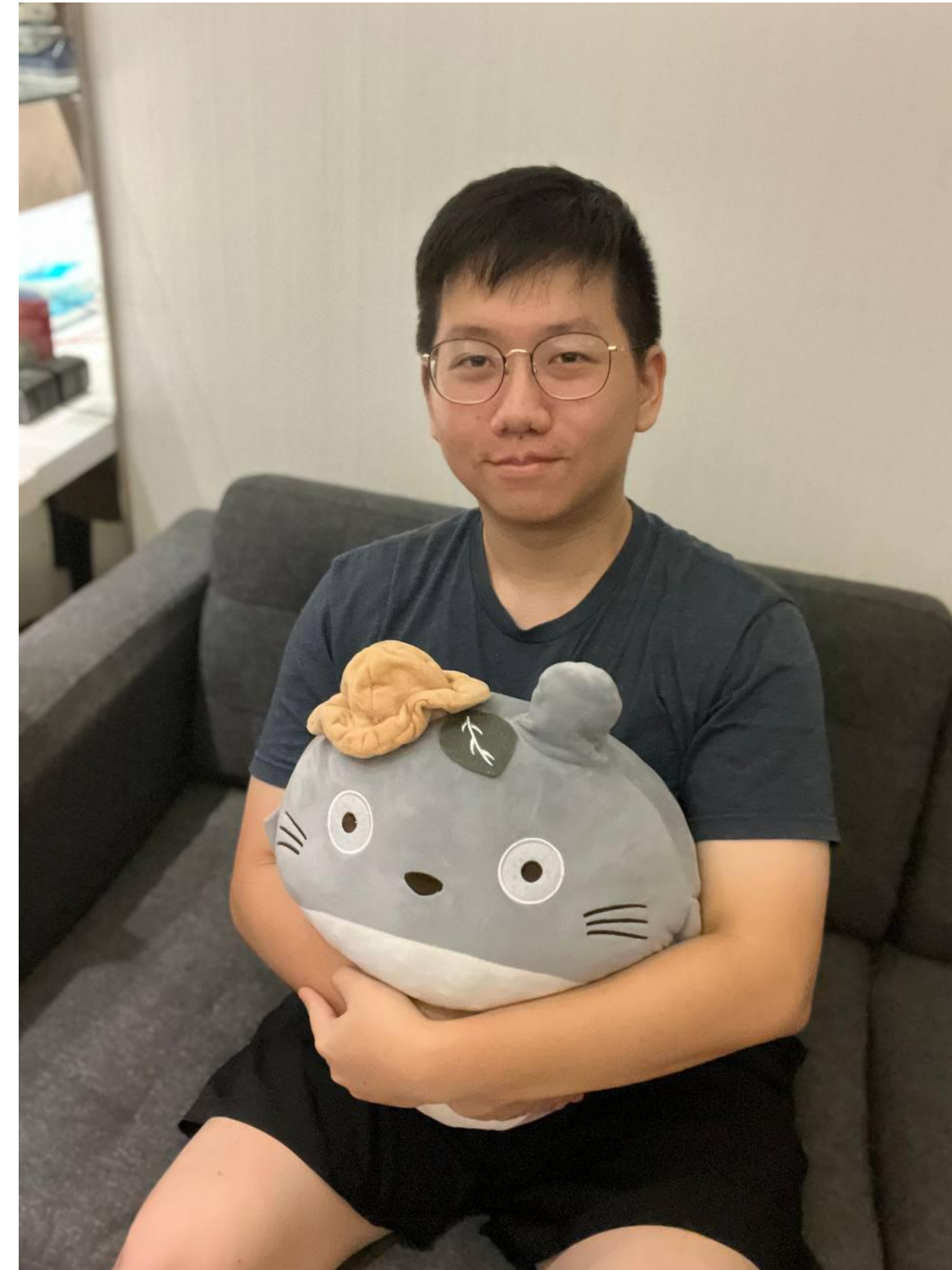


Kok Rui

Hi, I'm Kok Rui, a recent NUS grad.

I got my start through open source programmes and volunteer dev work, then interned at Trail of Bits, ByteDance, Databricks, and Jane Street.

These were done across a variety of modalities (remote, part-time, in-person, etc.), and decreasingly involved some flavour of security. I'm now a SWE in Jane Street's Singapore office.



Mayank

Hi! I graduated from NUS CS in 2023.

During my time there, I interned at Sea (Garena), CVWO, and as a Research Assistant focusing on software verification.

I'm now pursuing a PhD at the University of Pennsylvania, where I work on trustworthy AI for healthcare—specifically, decision-making using electronic health records.



Yi Xian

Hi! I'm Yi Xian, a final-year student studying Computer Science and Business Administration.

I'm currently interning at Palantir in New York City as a Forward Deployed Software Engineer.

Previously, I interned at Palantir's London office, and at startups focused on finance and AI-driven HR technology.



Panel Discussion

How will AI affect the Tech
landscape and what can I do to
prepare myself for it?

What is something you wish you knew earlier in your internship journey?

Are grades important for
internships? What about for
research internships?

Best way to land interviews for
overseas internships?

Should I diversify my internship
experience with different roles

or

Specialize in one specific role

What were some of your top considerations when applying for internships and why?

How different is startup culture from
Big Tech culture?

What are some common mistakes
to avoid while interning?

How to prepare for the
non-technical aspects of
interviews?

How important is having personal projects/open source?

Thank you for joining us today!

Look out for information about Career
Mentorship on our Telegram Channel 👁️👁️



Project Intern

by  **NUS
HACKERS**

(some useful Telegram groups)



Project Intern

<https://t.me/projectintern>

Ask anything about
tech internships and
new grad jobs in
Singapore and/or
overseas!



NUS Hackers

<https://t.me/nushackers>

Be notified of our
events and discuss
cool hacker/tech stuff!

sdfasdf

sdfasdf

sdfasdf

sdfasdf

Some text here