

New Grads Becoming New SREs

Catalyzing a “Circle of Life” in Ireland

Catalina Rete • Jennifer Petoff

sre.google • twitter.com/googlesre



Hello
my name is

Jennifer Petoff
(aka Dr. J)

- Ph.D. in Chemistry
- 16 years at Google
- Lead the Google Cloud Platform and Technical Infrastructure Education team
- Co-editor of the Site Reliability Engineering (SRE) Book
- Founded the #GoogleTechIE Uni Outreach Program
- Part-time Travel Blogger at Sidewalk Safari
- [I have a minor obsessions with photographing doors...]

Hello
my name is

Catalina Rete

- Computer Science graduate from Trinity College Dublin
- 3 internships in Google Dublin & Google Zurich
- 2 years at Google
- Software Engineer in AdsML SRE in Google Dublin
- Active participant of #GoogleTechIE Uni Outreach Program
- Have a strong passion for arts & crafts with a new hobby every week!

Can we bootstrap new
grads into new SREs?

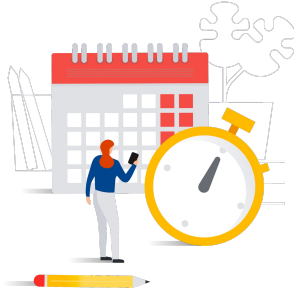
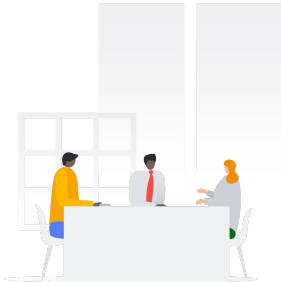
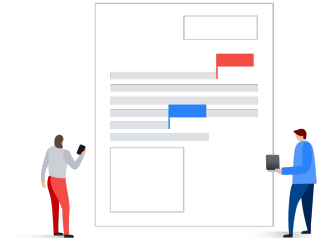


What was our starting point?

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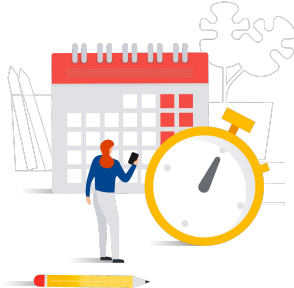
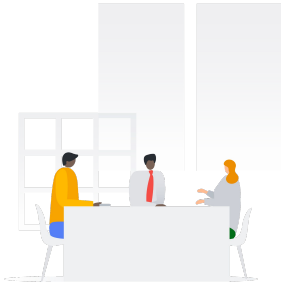
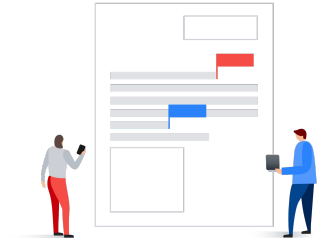
Key Challenges Identified



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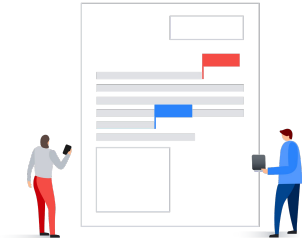
Applicants



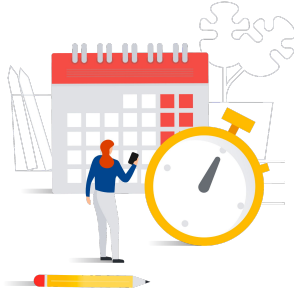
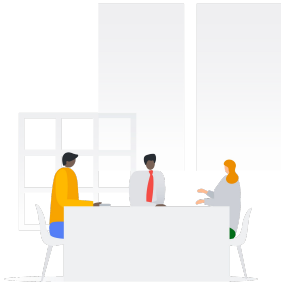
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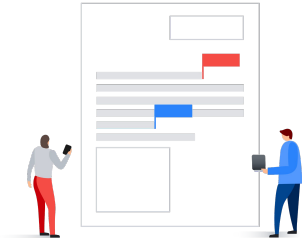
Resume/CV Quality



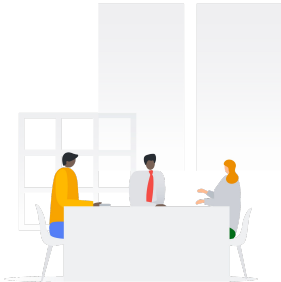
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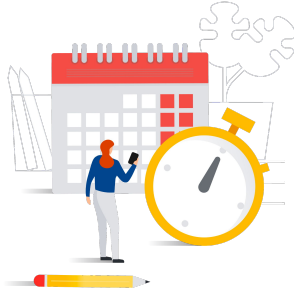
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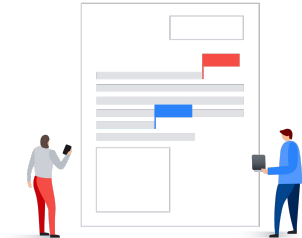
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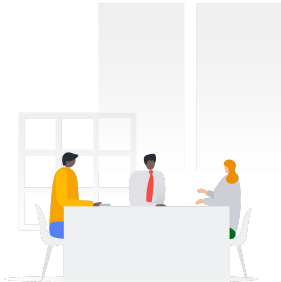
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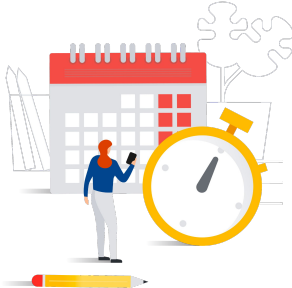
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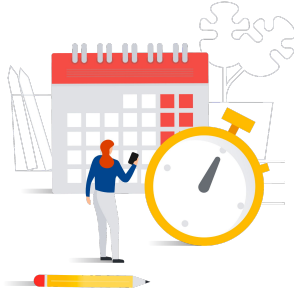
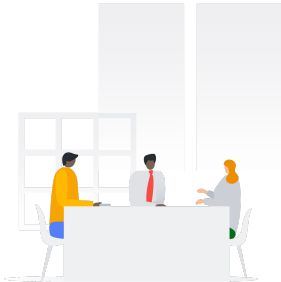


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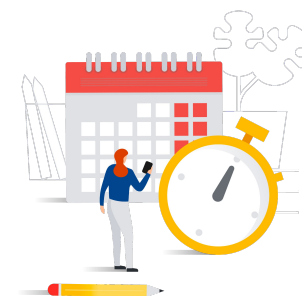
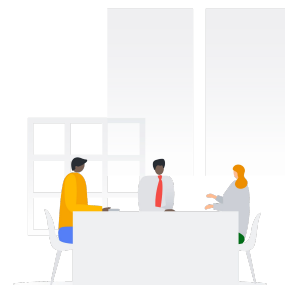
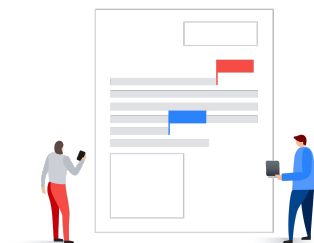


Bandwidth

Hypotheses Formulated



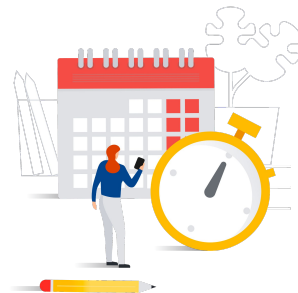
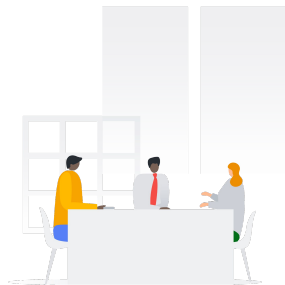
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Applicants

1. Students aren't aware that Google hires engineers in Ireland
2. Students are afraid of the interview process
3. Students don't know what SRE is

Hypotheses Formulated



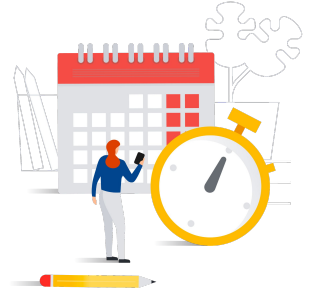
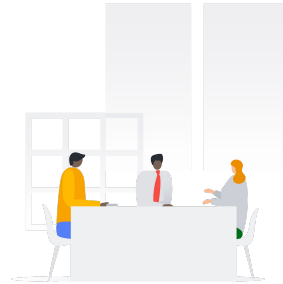
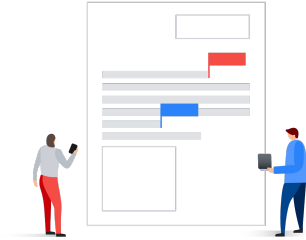
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Resume/CV Quality

1. Students aren't getting practical coding experience outside of the classroom
2. Students are not trained on how to write a compelling CV
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Hypotheses Formulated



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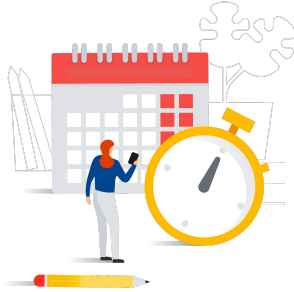
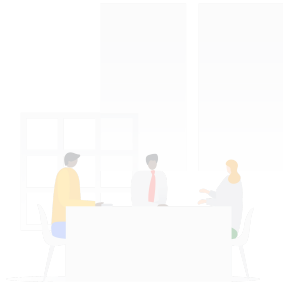
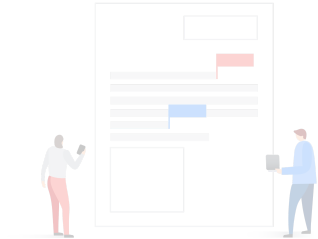
Resume/CV Quality


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Interviews

1. Students aren't getting practical coding experience outside of the classroom
2. Students not talking thru their thought process
3. Not enough experience coding 'on the spot'
4. Students get nervous

Hypotheses Formulated



 **Results will improve if we invest more effort**

Proposed Solutions



Applicants

Large-scale Open House and Campus Tech Talks

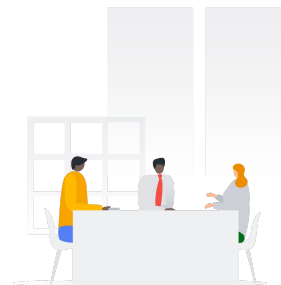


Resume/CV Quality

CV Skills Workshop

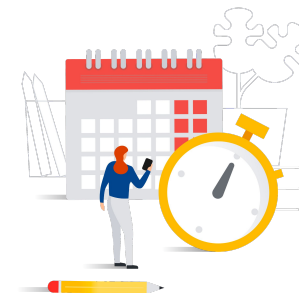
Algos Workshops and Code Retreats

Support Coding Competitions



Interviews

Focus on internships



Proposed Solutions



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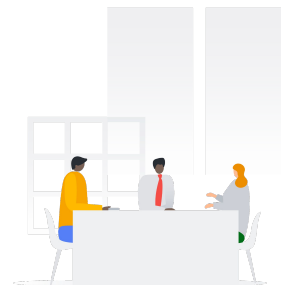


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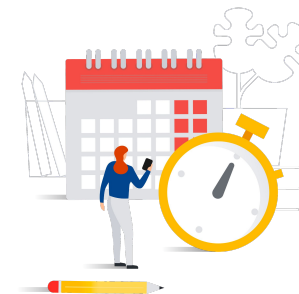
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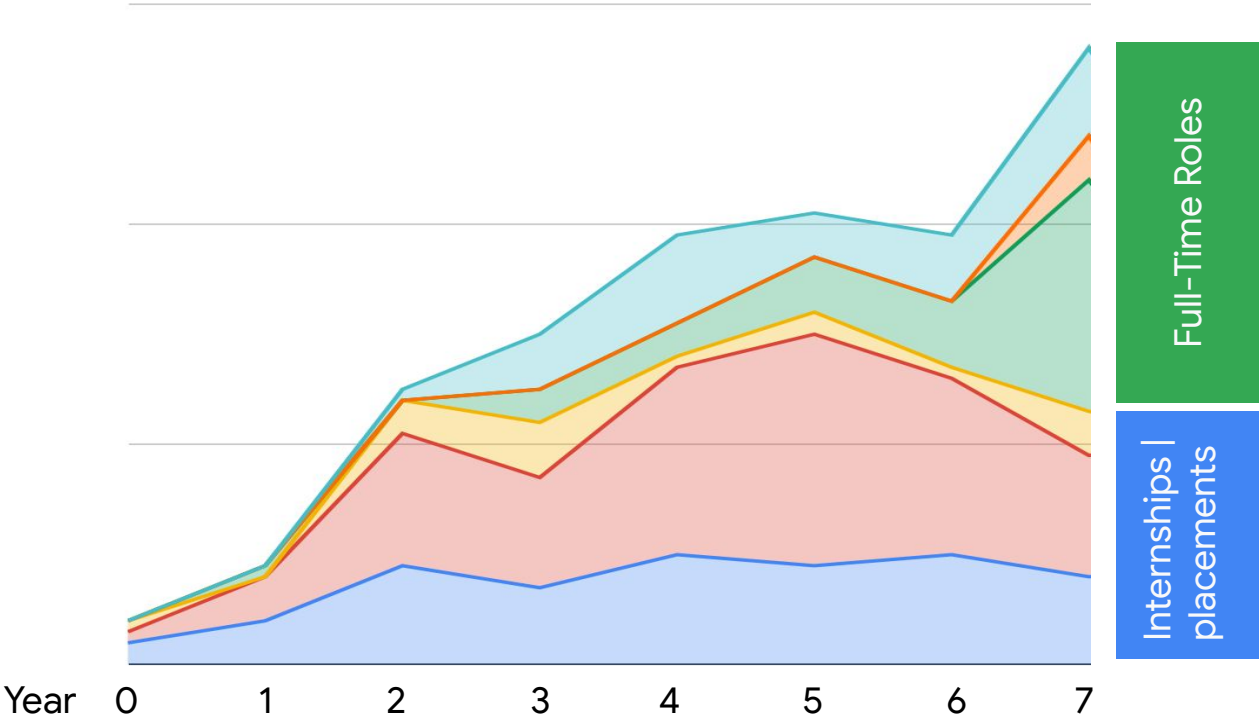


Bandwidth

★ ★ Results will improve if we invest more effort

How far have we come?

How far have we come?





What we learned (and who we met along the way)

1. Networks & social media are important amplifiers

Dedicated Hashtag

#GoogleTechIE gave students a channel to follow for information about events and placements.

Cultivating Contacts

among faculty and career services at universities and institutes of technology across Ireland helped get the word out.

Connecting on LinkedIn

encourage students to connect on LinkedIn to forge deeper connections and to drive awareness.

Taking Time to Reply

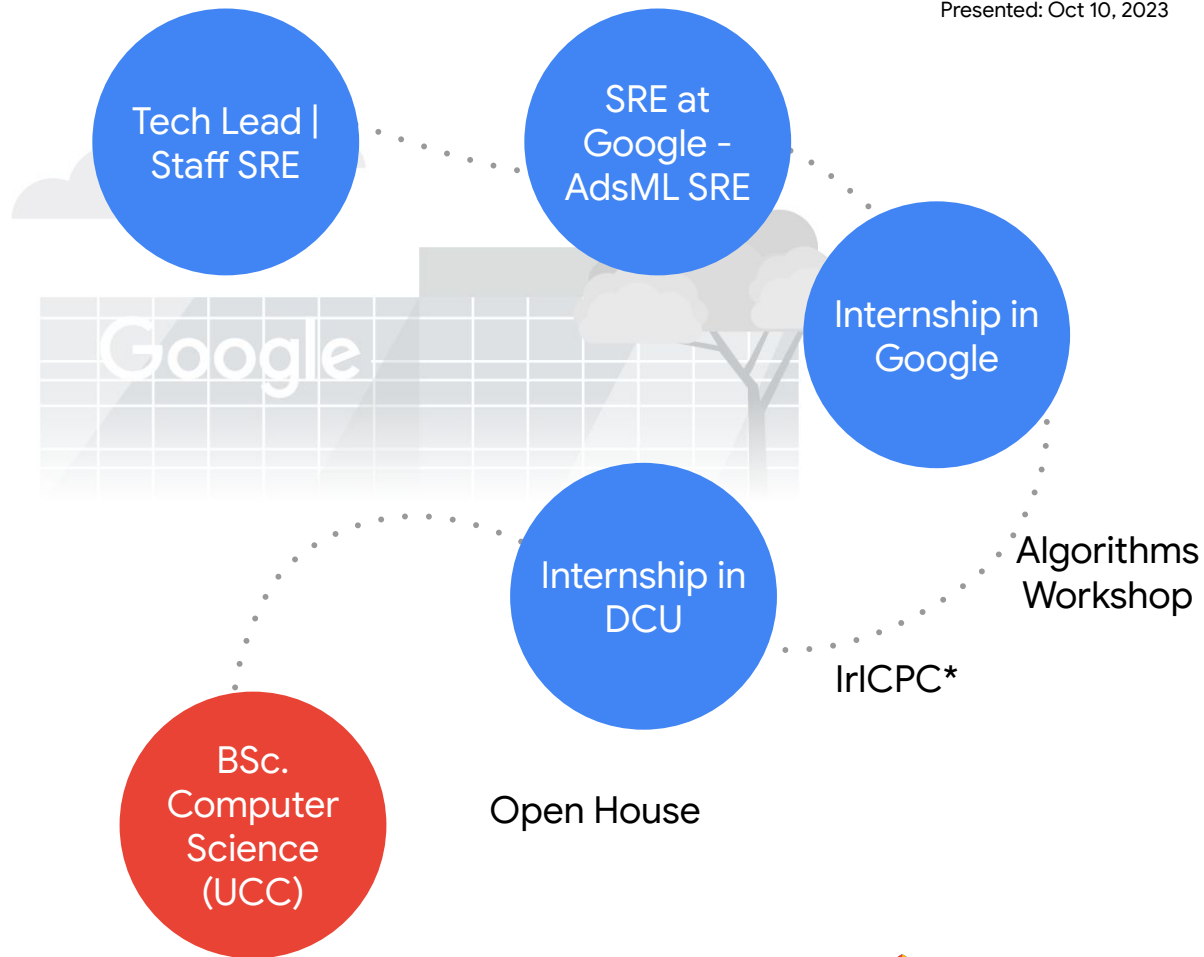
to inquiries from those who take the time to connect helps build trust and helps students feel supported.



Path to Google:

Adam Gillesen

Google Dublin



* IrICPC = All Ireland Coding Competition

2. Accept a little bit of toil for the greater good

Treat people as individuals

Reply to inquiries, help where you can.

This is **not** a classic SRE “cattle not pets” situation.

Follow-up w/ successful students

congratulate those who get and/or accept an offer.

Follow-up with the others

who were not selected after interviewing or who declined your offer.

Keep meticulous records

to show incremental progress in the short term while recognizing that we are in this for the long haul.

3. Take steps to build a diverse pipeline

Look beyond the “top” schools

Cast a wide net and be inclusive about the schools you build relationships with. Don't just focus on the very top academic institutions

Partner with student groups

Research student groups aligned with populations under-represented in Tech.

Show up at events

e.g., Women in STEM events, International Women's Day Events.

Leverage employees from URGs

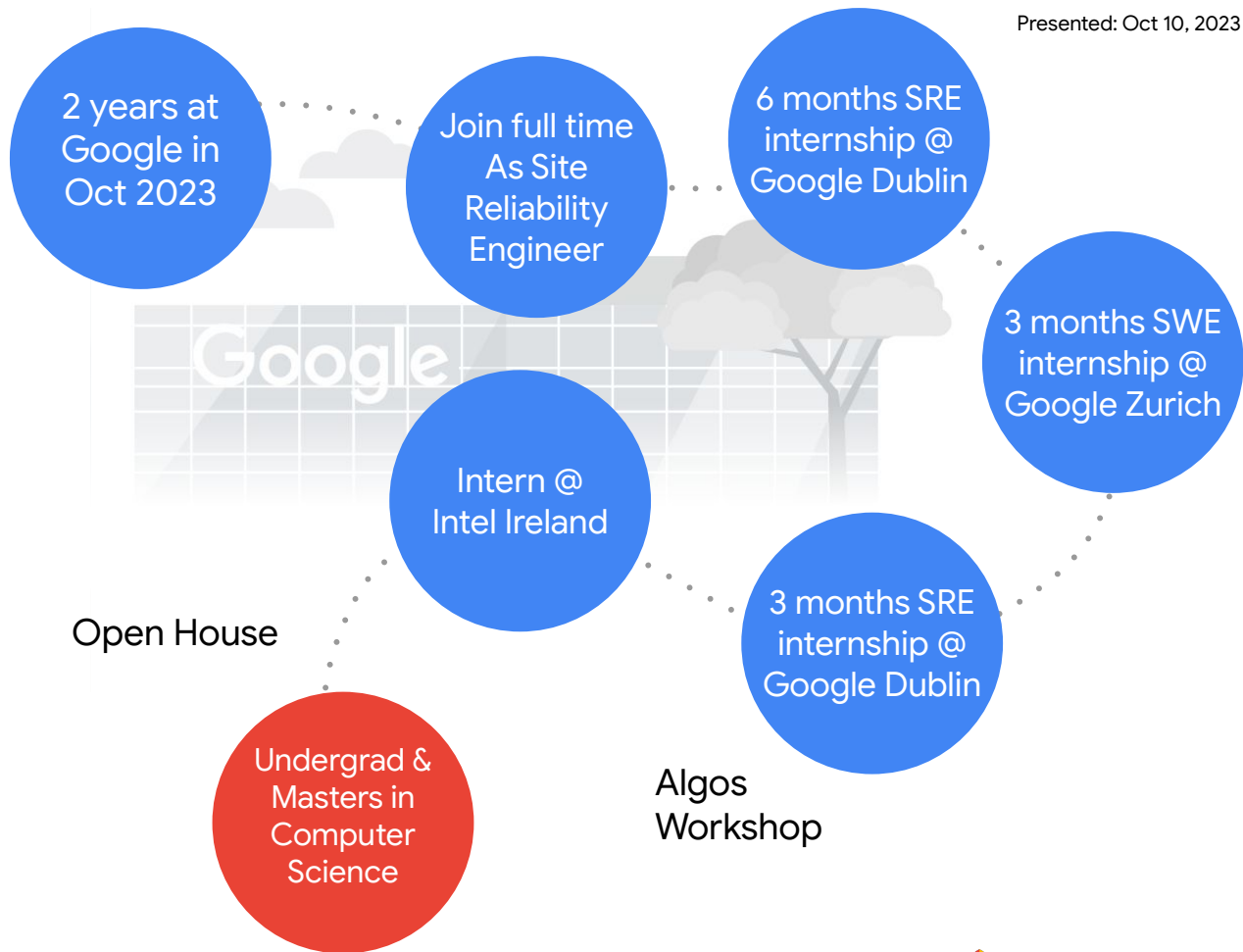
who can be role models to the students you'd like to recruit.



Path to Google:

Catalina Rete

Google Dublin





⋮

Path to Google:
**Hung-Chuan
Huang**

Google Dublin



Google
Ireland
Algos
Workshop

4. Volunteers & role models are critical to success

Activate recent grads

e.g., host panel discussions with recent grads

Utilize alumni networks

e.g., appoint alumni champions to work with their schools

Inspire: “I could do that!”

Help current students see what’s possible and to see themselves in the volunteers sent to campus

Demystify what the role is like

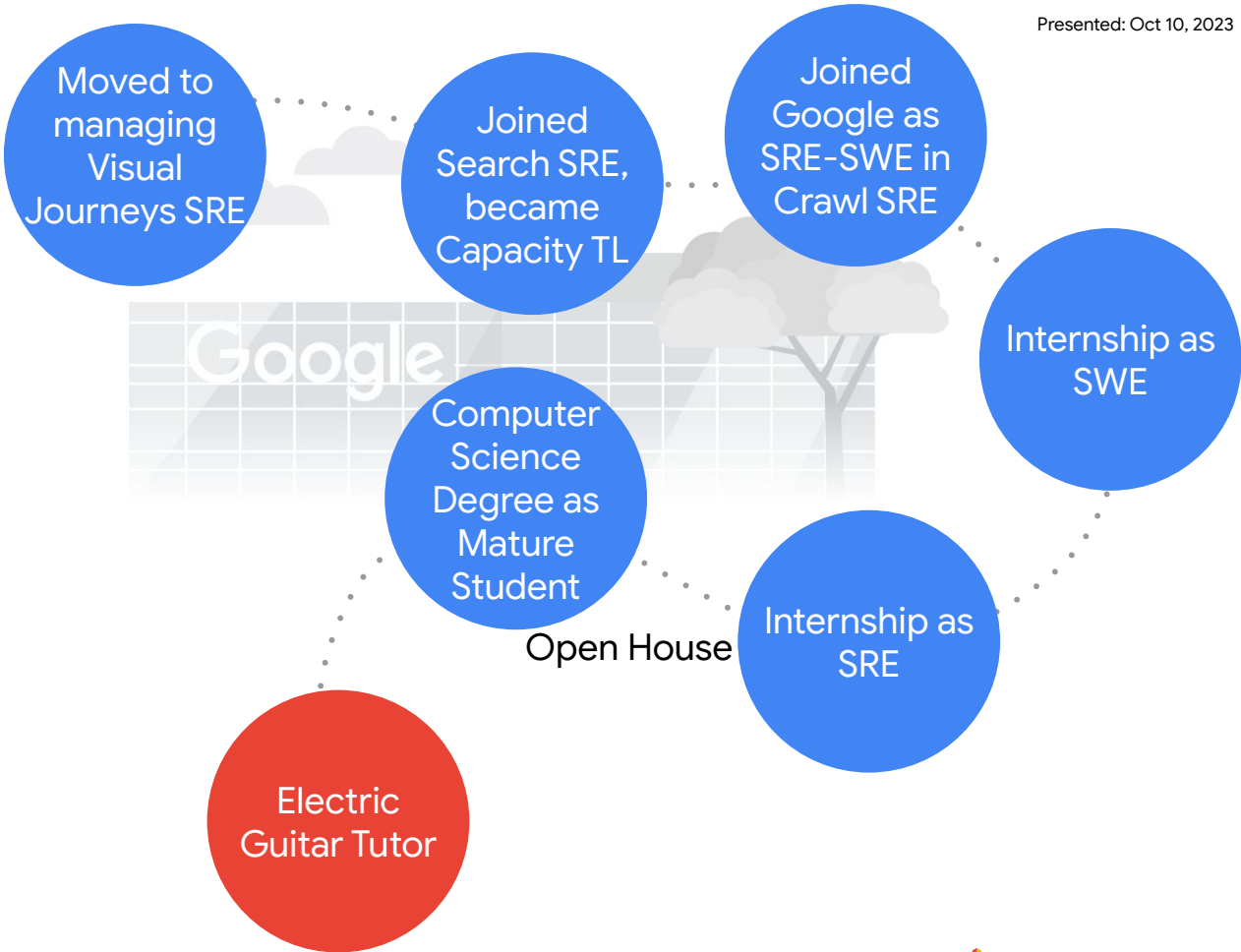
Engineering/SRE volunteers talk about what they do and help build excitement about internships and full time roles



Path to Google:

Daniel Crawford

Google Dublin



5. Be a good partner (but be willing to 'go rogue')

Make friends with your Staffing team

You need their expertise, their processes, and their support in order to be successful

Recruit a recruiter

to join your core team

Ask for forgiveness...

...rather than permission

Convince the skeptics

Understand why they are skeptical and then bring data that demonstrates small and steady progress.

6. Play the long game while demonstrating short term “wins”

Focus on intern recruiting

The stakes and barrier to entry tend to be lower. Placements give students hands-on experience that will help them be successful in industry once they graduate.

“Convert” your interns to full time hires

after one internship (or 3!) or even a few years after graduation.

Promote “feeder” roles

SRE might not be the right role for some students immediately after graduation. Are there other roles they may be more suited to now that may lead them to SRE down the road?

Communicate incremental progress

in driving applications... in number of interviews... in interns hired... in full time hires. Do this at least once a year.



Path to Google:

Sophie Crowley

Google Dublin

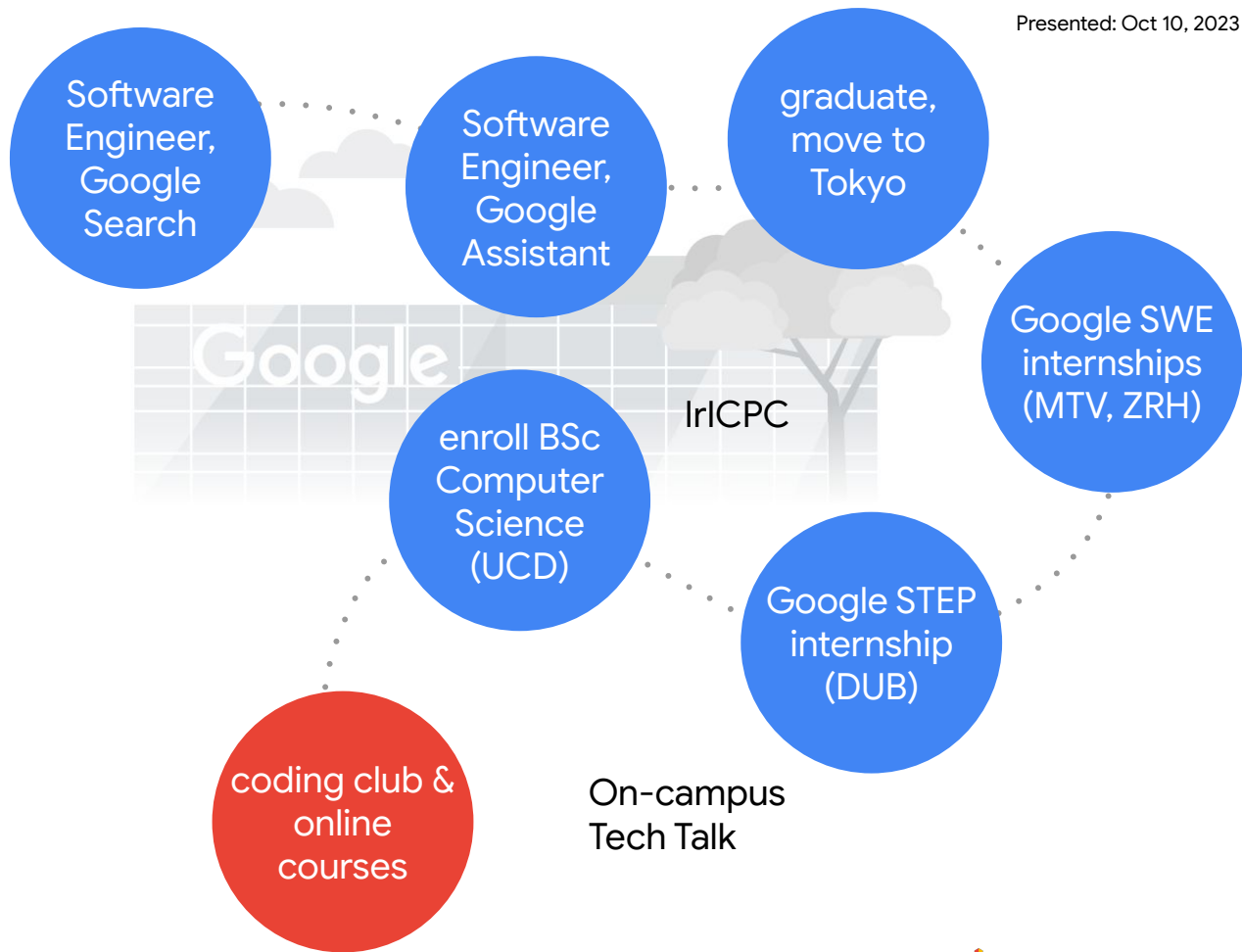




Path to Google:

Cathal Weakliam

Google Tokyo





Path to Google:
Sulla Montes

Google Dublin



7. Take a broad view of success

Location

We were focused on recruiting *from* schools in Ireland, but success = placing a student anywhere in the world

Role

We were focused on recruiting for *SRE roles*, but success = placing a student in a wide range of engineering roles.

Timing

We were focused on recruiting *new grads* but success = hiring any students who engaged with our programs even after graduation.

Elevating the profession

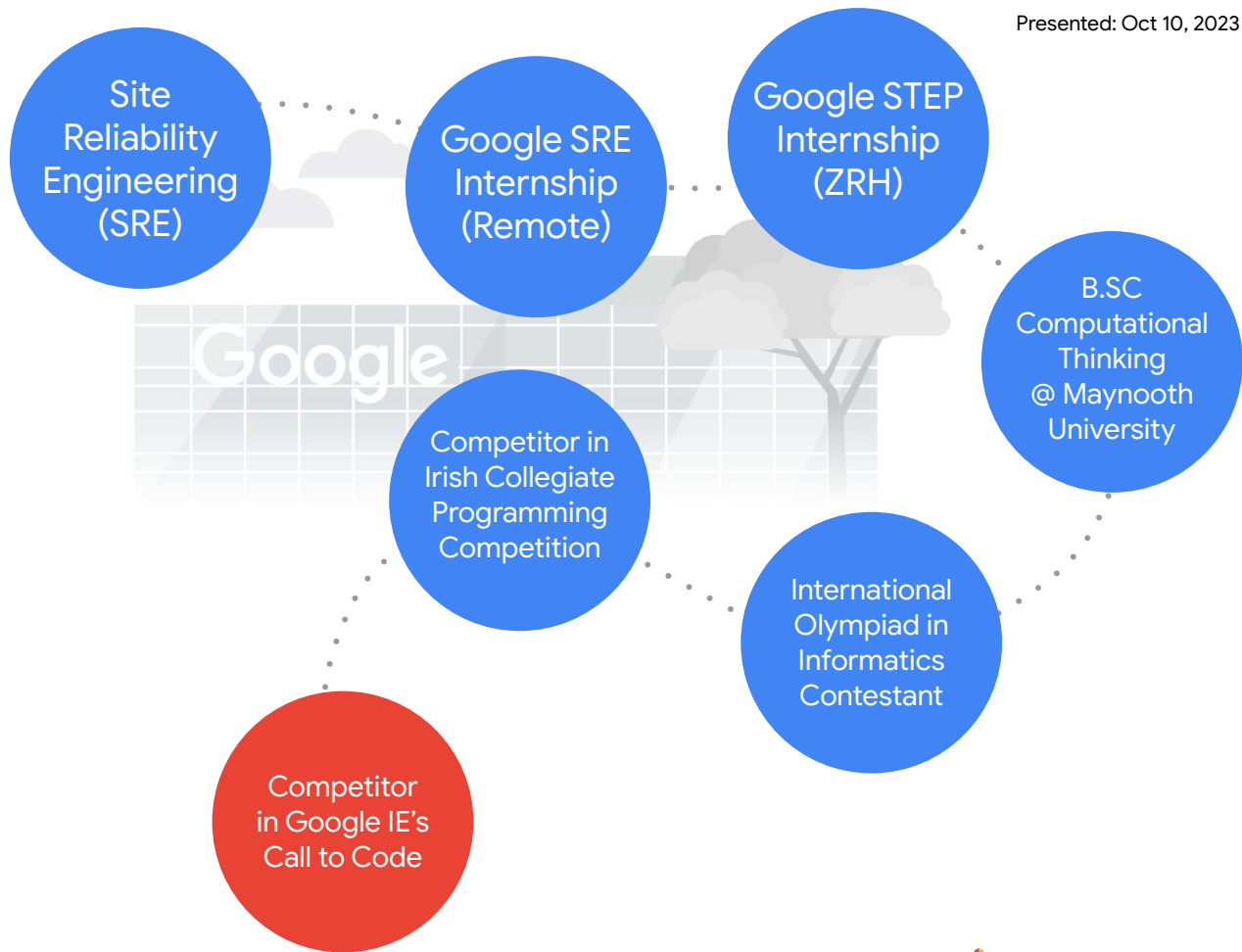
We were focused on recruiting *for Google*, but we considered it a success if a student pursued SRE as a profession *anywhere*.



Path to Google:

Oisín O'Dwyer

Google Munich

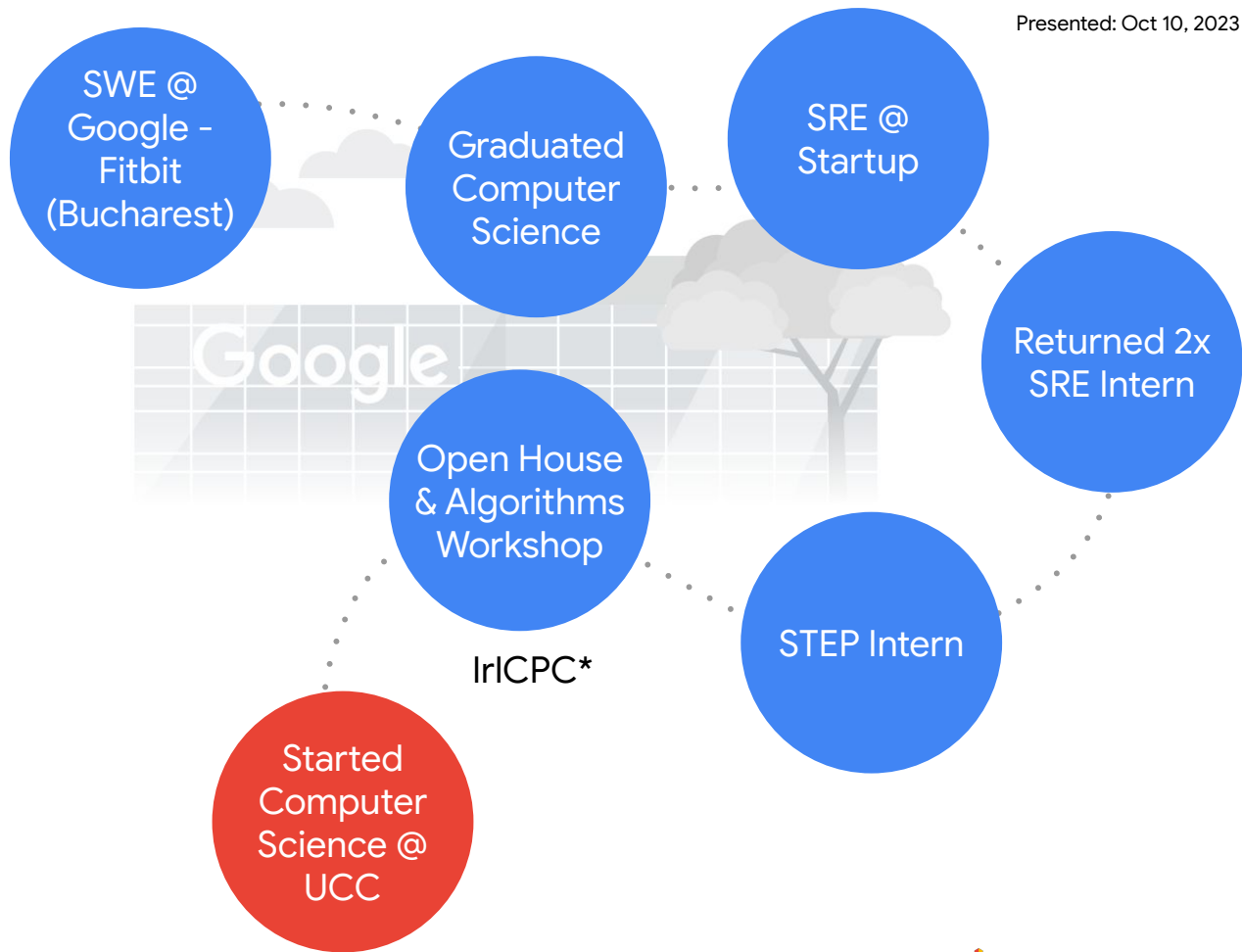




Path to Google:

Aidan Molloy

Google Dublin



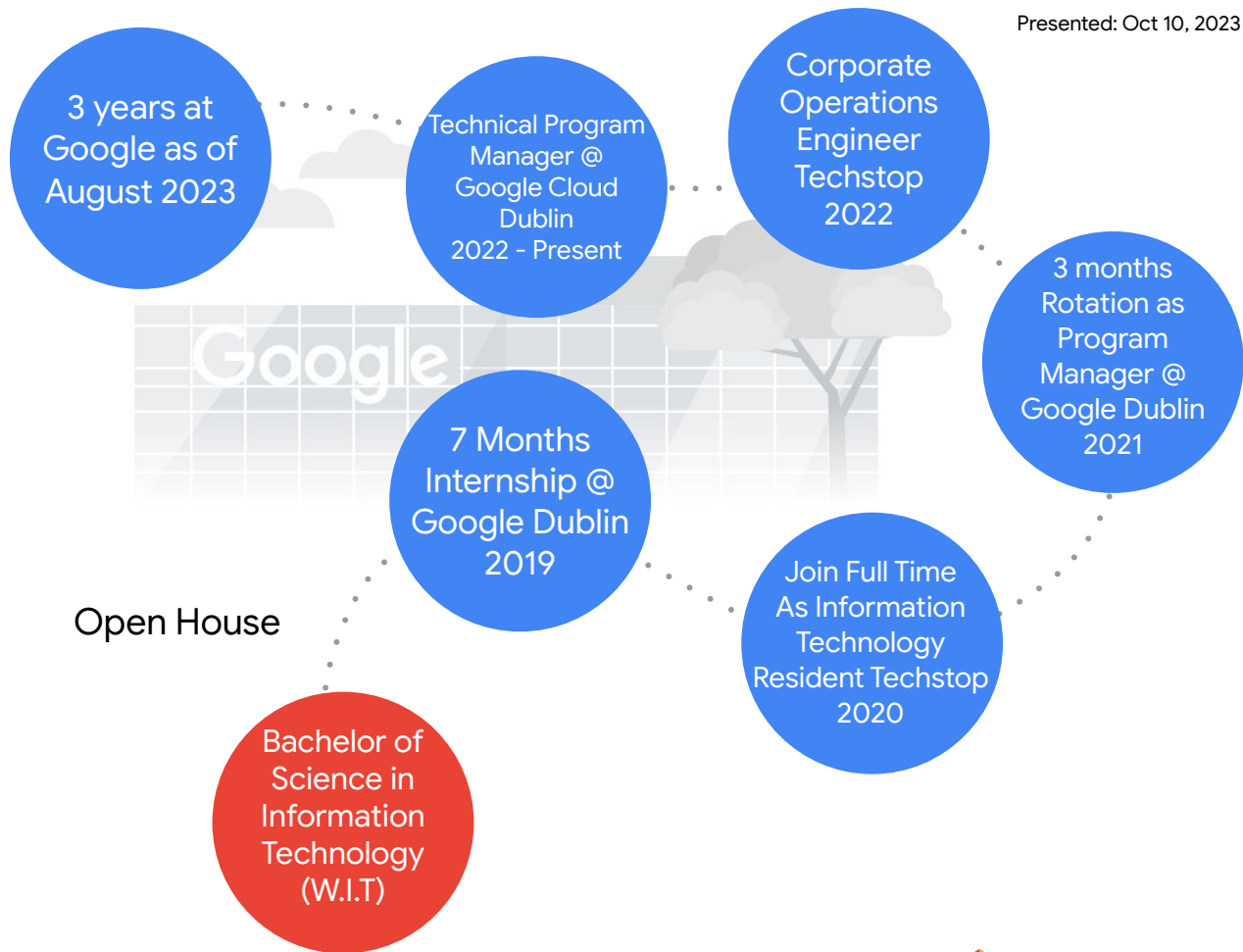
* IrICPC = All Ireland Coding Competition #GoogleTechIE was a sponsor



Path to Google:

Laura Hennessy

Google Dublin





Path to Google:

Eimear Crotty

Xoogler, Dublin

General Technical Director, Walt Disney Animation Studios (Vancouver)

SRE Manager @ Google Ireland

SRE @ Google Ireland

GoogleTechIE Co-Lead

SRE @ Google Ireland

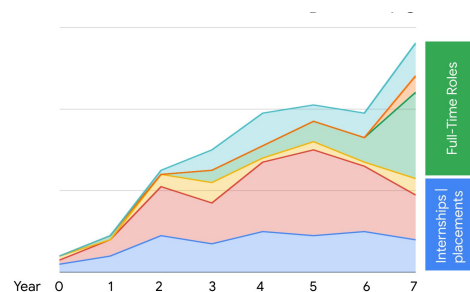
MSc, Computer Animation & Visual Effects (Bournemouth)

BSc, Computer Science, UCC

Open House

2x Women in Tech focused events

7. Take a broad view of success | “winning”



Location

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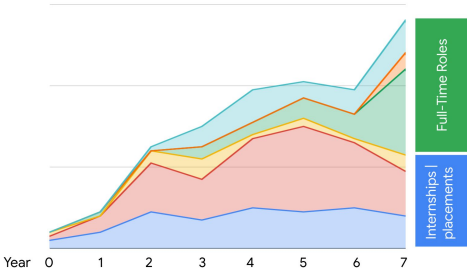


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Elevating the profession

We were focused on recruiting for Google, but we considered it “winning” if a student pursued SRE as a profession

8. Make it Self-Sustaining



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★ Yes!



Key Takeaways

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- **Can you bootstrap new grads into new SREs?**

Key Takeaways

- **SRE may not be routinely taught in the classroom...**

...but that isn't an insurmountable obstacle to new grad hiring

- Awareness raising + skill building = **A Winning Formula**


- **Can you bootstrap new grads into new SREs?**

yes! If you are willing to put in the effort...



SRE Classroom - sre.google/classroom

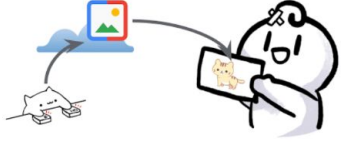
Tutorials



The diagram illustrates a distributed PubSub system. On the left, there are three server racks labeled 'Subscribers'. In the center, there are three server racks labeled 'Topics'. On the right, there are three server racks labeled 'Publishers'. Dashed arrows show the flow of data from Publishers to Topics and from Topics to Subscribers. A small icon of a person is shown interacting with the Publishers.

Distributed PubSub

Build a planet scale distributed PubSub system using NALSD principles. Learn about some foundational large system design principles and concepts. Topics include correctness, reliability, performance, different inter-system communication styles, and more. We introduce the problem requirements in detail and walk through an example solution.



The illustration shows a cartoon character holding a tablet. A cloud icon is connected to a laptop icon, which is connected to the character's tablet. This represents a distributed image server system.

Distributed ImageServer

Build a planet scale distributed ImageServer system using NALSD principles. Learn about some foundational large system design principles and concepts. Topics include sharding, replication, latency, load balancing, and more. We introduce the problem requirements in detail and walk through an example solution.



The graph shows a line representing a Service Level Indicator (SLI) over time. The x-axis is labeled 'time' and is divided into three colored regions: blue, red, and blue. The y-axis represents the SLI value. A horizontal dashed line represents the Service Level Objective (SLO). The SLI line starts above the SLO in the blue region, dips below it in the red region, and rises above it again in the blue region. A checkmark is visible at the end of the line.

The Art of SLOs

The Art of SLOs introduces participants to concepts in measuring service reliability: Service Level Indicators (SLIs) and Service Level Objectives (SLOs), and gives them some hands-on experience with creating these measures in practice.

Thank you!

Questions?