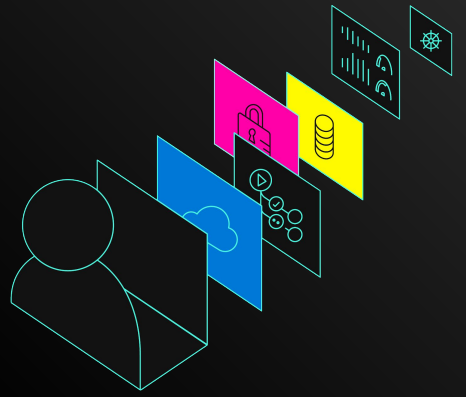
goto;

GOTO
Copenhagen 2023

#GOTOcph

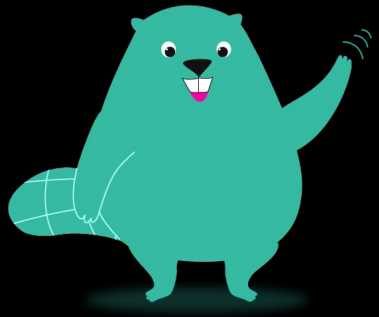
Backstage | Spotify



Ramp up, Fan out

The Tools Spotify Uses to Onboard Engineers and Encourage Career Mobility

Helen Greul
Backstage Engineering Lead @Spotify



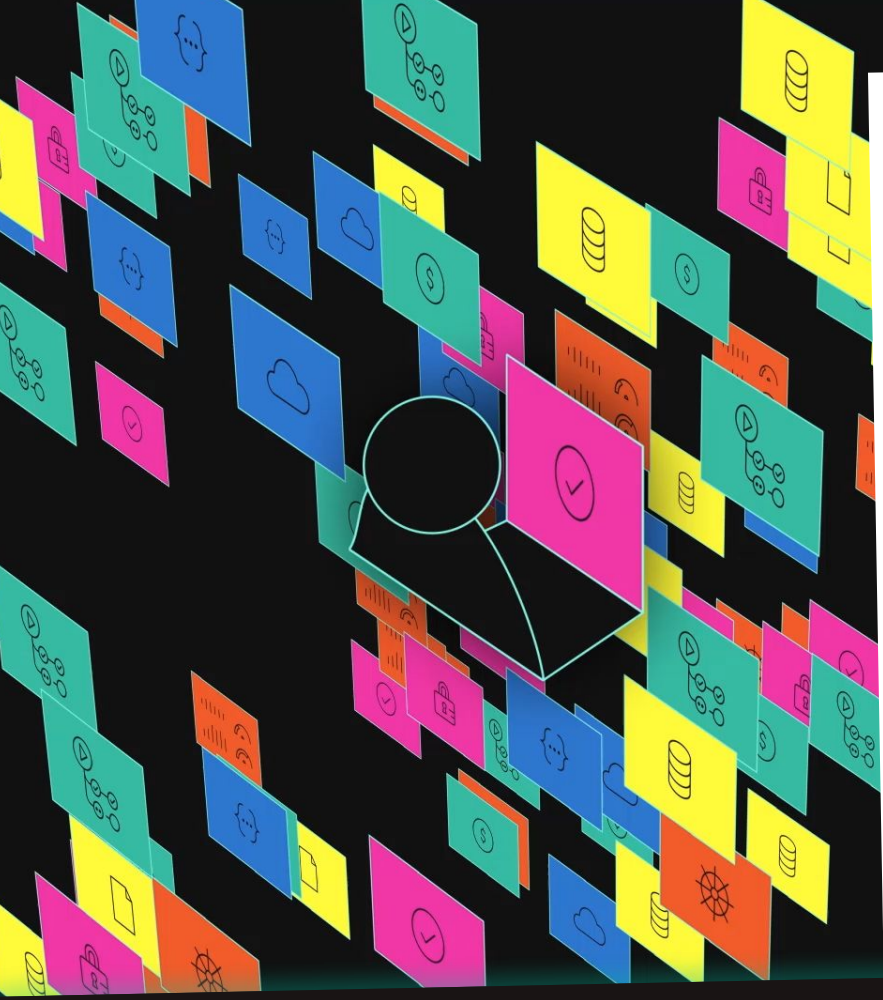
Bowie the Beaver

Developer at Spotify

Helen Greul

Eng Lead - Backstage @Spotify

A few disclaimers..

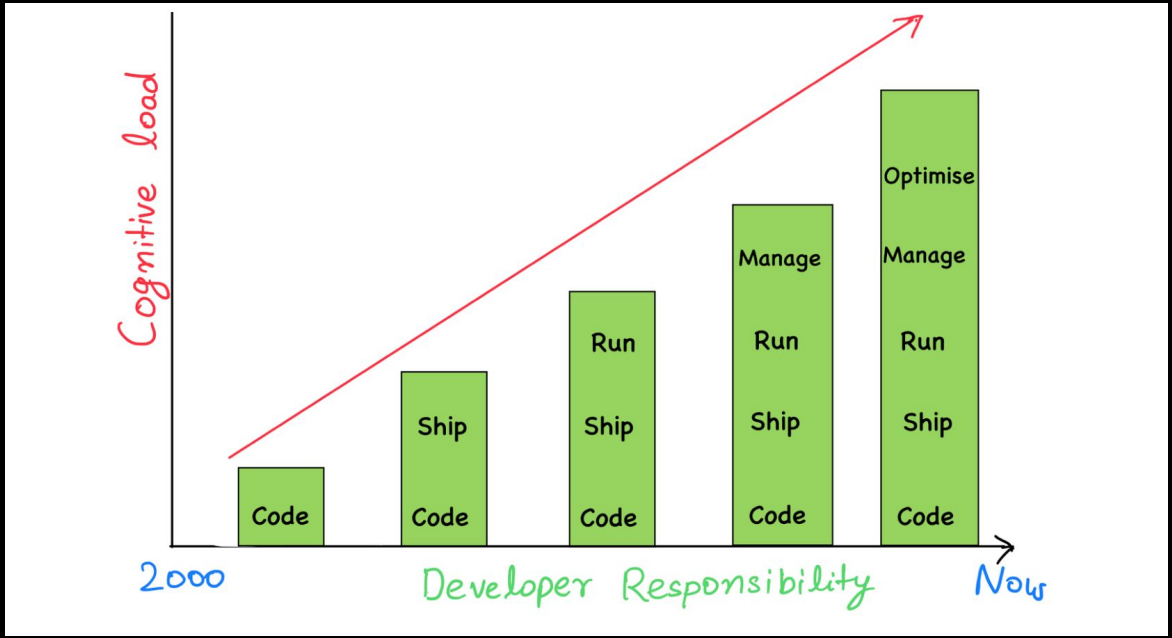


Software is still eating the world …

… but with new requirements

- Thousands of request per second to millions
- Monoliths to 1000s of microservices
- On-prem to mixed and multi-cloud
- Singular databases to Big Data
- Do-it-yourself to Saas Explosion
- 100s of frameworks to 10000s
- Heuristics to Advanced ML systems
- ISO 9000 to a regulatory renaissance
- Teenage hackers to state-sponsored cyber threats
- …

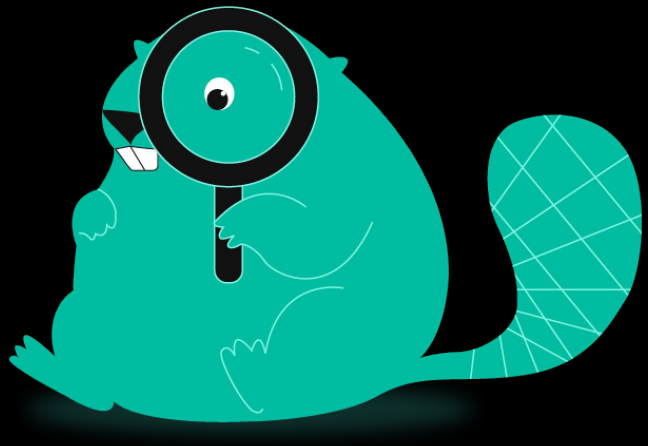
You build it you run it



Source "How to Platform Engineering" by Himanshu Mishra

Challenges affecting DevEx:

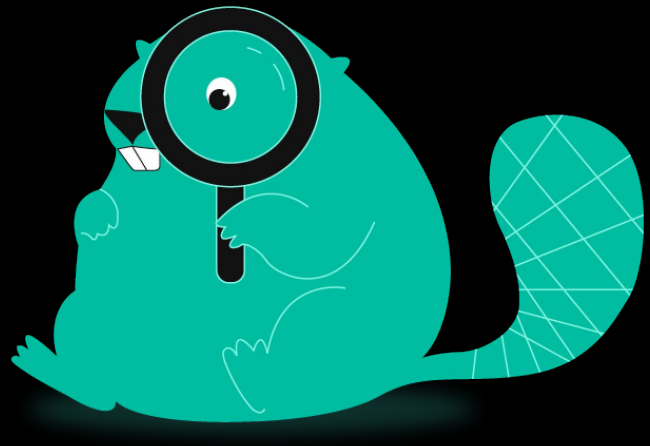
🚀 Onboarding



Challenges affecting DevEx:

🚀 Onboarding

🌱 Growth and connectivity



State of Engineering onboarding

8 months to max productivity

23% Leave < 1 year

22% receive no formal onboarding

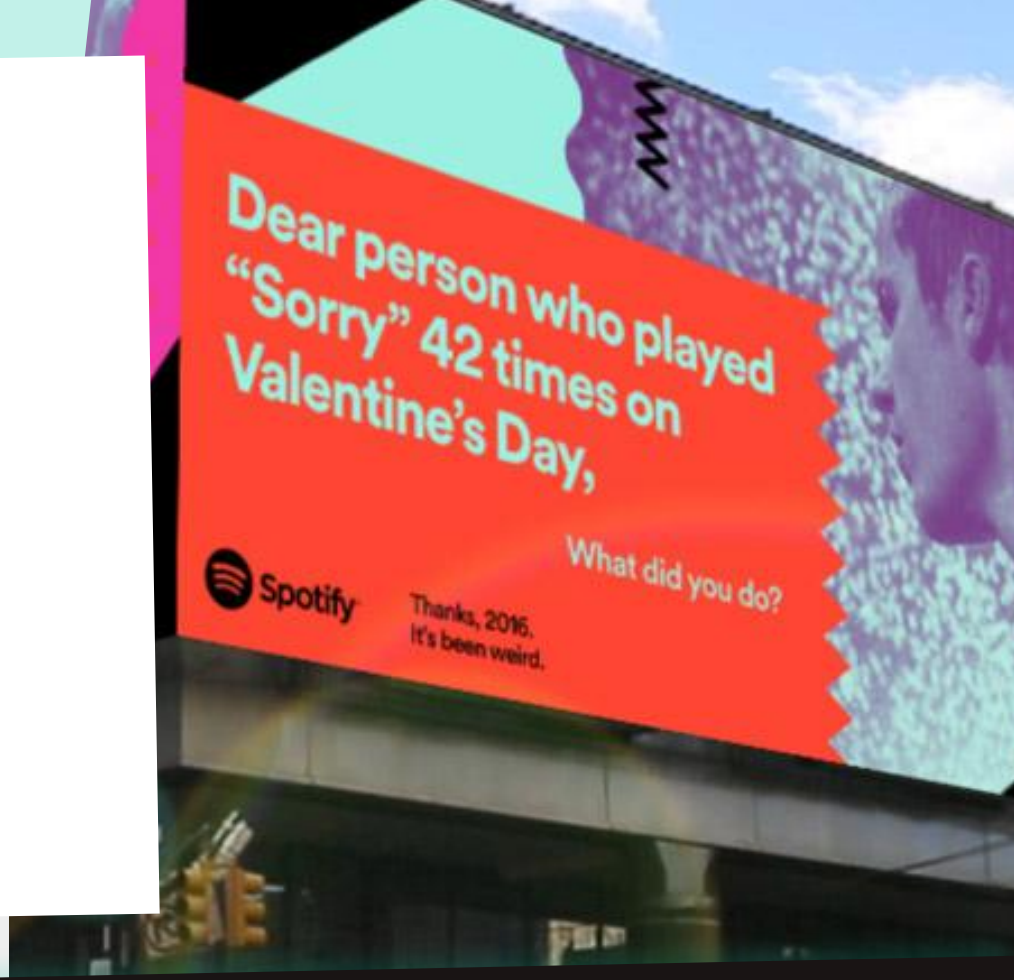
Source allied workforce mobility survey: onboarding & retention, **hbr.org**

Let’s take a trip in the way back machine...

Spotify was in **hyper-growth mode**, hiring engineers at a breakneck pace

But our developer productivity metrics weren’t getting better despite all the new hires

- **time-to-10th-PR** > 60 days
- **buddy system** had problems
- **self reported productivity** score decrease



Search Backstage

Quick access

RECENTLY VISITED

- Service backstage-gateway
- Documentation web
- Documentation imaginary-goats
- Documentation web-infra-adrs
- Project tastebudz-spotify

FREQUENTLY VISITED

Toolbox

LEAVE FEEDBACK

GENERAL

- Spotify Start
- Code Search
- Cloud Search
- Stack Overflow
- Skill Exchange
- PagerDuty
- Tech Insights
- Groups

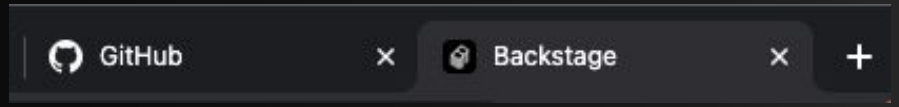
Backstage
Search
Explore
Manage
Experiment
Data
ML
Docs
Create
More
Add Shortcuts
Web Golden P...
backstage-gat...
Unpin Sidebar

https://github.com/

Backstage

https://github.com/

Backstage



Backstage

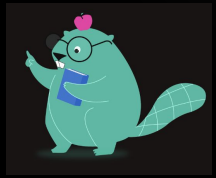
An open platform for building developer portals

Created at

Donated to

Here is what we did

Engineering Bootcamp



Golden Path tutorials

Software templates

From 0 to Shipping it!

13,017 of 13,053

Welcome to your Virtual Spotify Onboarding

External Inbox ×

noreply-workday spotifymail <spotify@myworkday.com> Tue, Aug 10, 2021, 8:05 AM

to me

Hi there,

In the coming weeks, you will attend Intro to the R&D Community Day and possibly Engineering Bootcamp and Data Science Bootcamp (depending on your role).

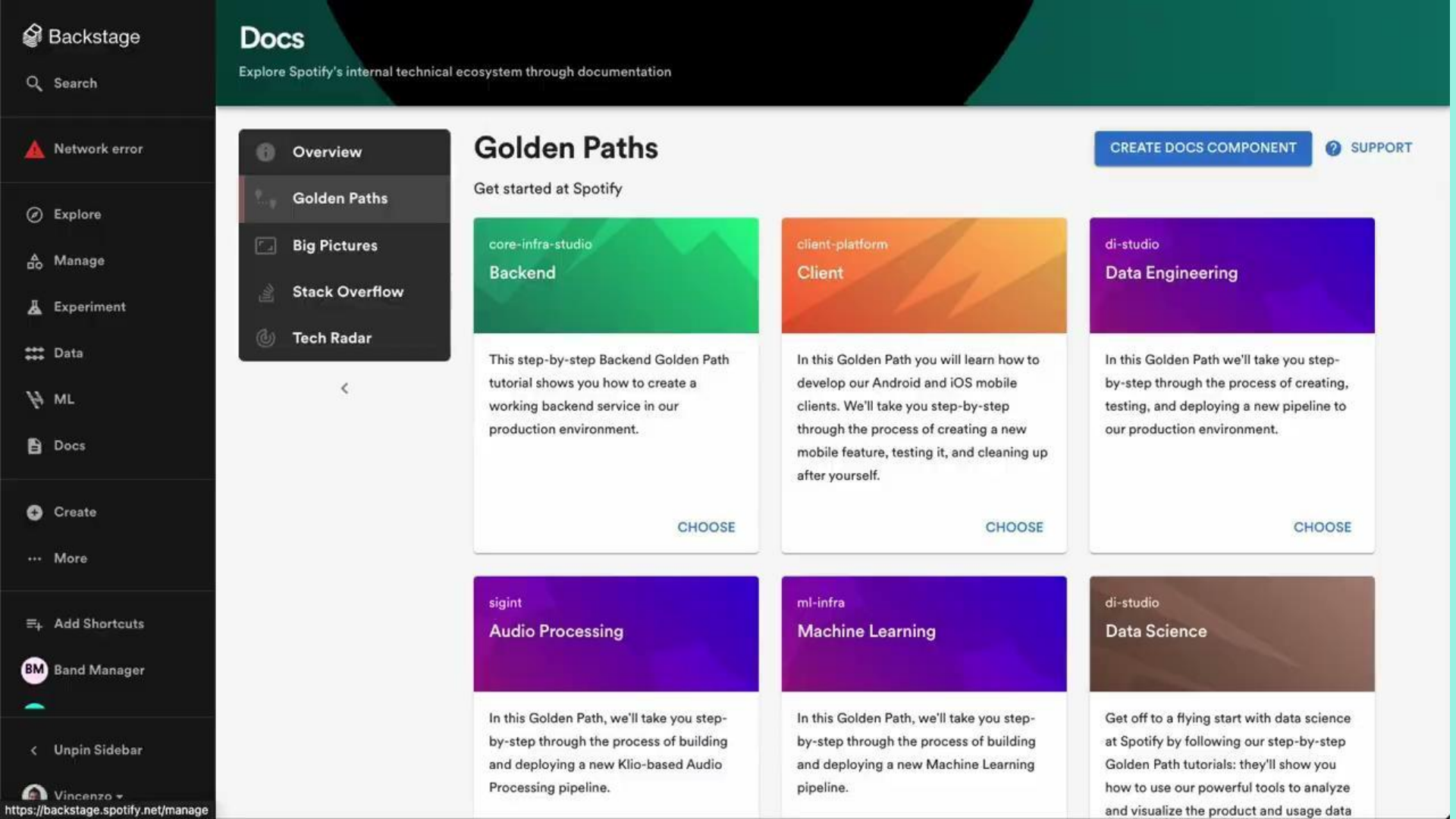
In order for you to properly prepare, please make sure to complete the following:

ALL:

- Pre-work for R&D Community Onboarding (Please note that you will need to click the link once, close the window, and click the link again in order to be redirected to the correct page).

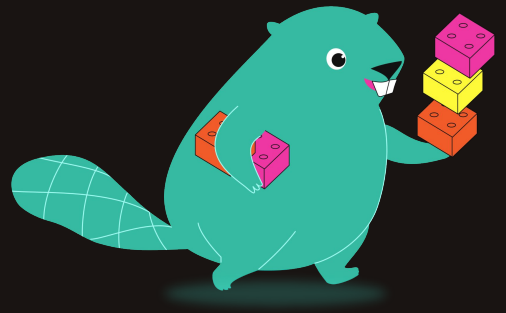
ENGINEERS ONLY:

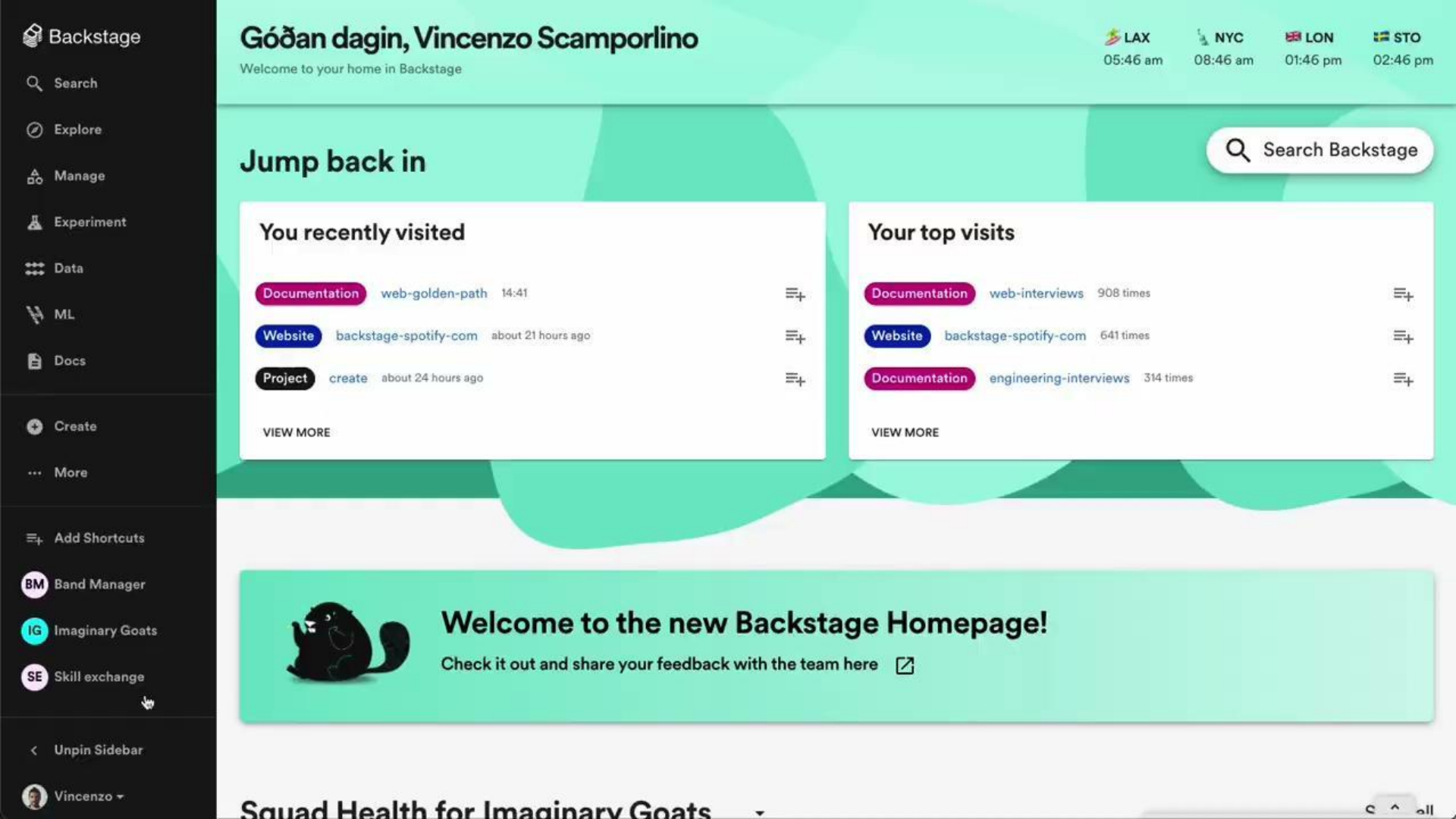
- Golden Path Tutorial - Please discuss with your manager which tutorial you should complete in preparation for Engineering Bootcamp.
- Should you encounter any issues with the Golden Path prep work or have any questions, please have a look at this document to know who to reach out to.
- Spotify Trello Account Set Up: Please follow the instructions in the link to set up your Spotify Trello account

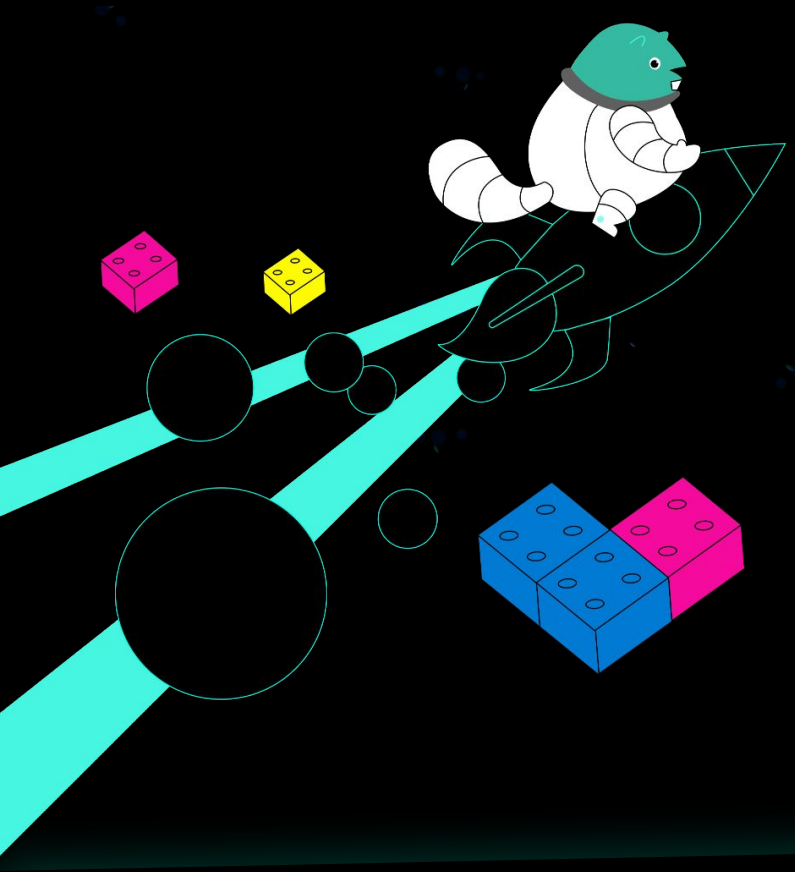

Backstage
Search
Network error
Explore
Manage
Experiment
Data
ML
Docs
Create
More
Add Shortcuts
Band Manager
Unpin Sidebar
Vincenzo
https://backstage.spotify.net/manage
Docs
Explore Spotify's internal technical ecosystem through documentation
Overview
Golden Paths
Big Pictures
Stack Overflow
Tech Radar
Golden Paths
Get started at Spotify
CREATE DOCS COMPONENT
SUPPORT
core-infra-studio
Backend
This step-by-step Backend Golden Path tutorial shows you how to create a working backend service in our production environment.
CHOOSE
client-platform
Client
In this Golden Path you will learn how to develop our Android and iOS mobile clients. We'll take you step-by-step through the process of creating a new mobile feature, testing it, and cleaning up after yourself.
CHOOSE
di-studio
Data Engineering
In this Golden Path we'll take you step-by-step through the process of creating, testing, and deploying a new pipeline to our production environment.
CHOOSE
sigint
Audio Processing
In this Golden Path, we'll take you step-by-step through the process of building and deploying a new Klio-based Audio Processing pipeline.
ml-infra
Machine Learning
In this Golden Path, we'll take you step-by-step through the process of building and deploying a new Machine Learning pipeline.
di-studio
Data Science
Get off to a flying start with data science at Spotify by following our step-by-step Golden Path tutorials: they'll show you how to use our powerful tools to analyze and visualize the product and usage data

Standards can set you free

- **standards by ease** vs ***standards by constraint***
- best practices included
- focus on **high value** activities




Backstage
Search
Explore
Manage
Experiment
Data
ML
Docs
Create
More
Add Shortcuts
BM
Band Manager
IG
Imaginary Goats
SE
Skill exchange
Unpin Sidebar
Vincenzo
Góðan dagin, Vincenzo Scamporlino
Welcome to your home in Backstage
LAX
05:46 am
NYC
08:46 am
LON
01:46 pm
STO
02:46 pm
Jump back in
Search Backstage
You recently visited
Documentation
web-golden-path
14:41
Website
backstage-spotify-com
about 21 hours ago
Project
create
about 24 hours ago
VIEW MORE
Your top visits
Documentation
web-interviews
908 times
Website
backstage-spotify-com
641 times
Documentation
engineering-interviews
314 times
VIEW MORE
Welcome to the new Backstage Homepage!
Check it out and share your feedback with the team here
Squad Health for Imaginary Goats



On Day 1:

- Setup dev environment
- Create a new service from scratch
- Deploy to production
- Setup metrics, alerting and Monitoring
- Expose your service to the world by changing the **DNS** in production

Feeling onboarded?

"For me, it's when I'm independent to do stuff on my own. A feeling of autonomy'"

Feeling onboarded?

"For me, it's when I'm independent to do stuff on my own. A feeling of autonomy'"

“Caring about the people that are just walking in the door right now – I think that just speaks volumes to the culture.”

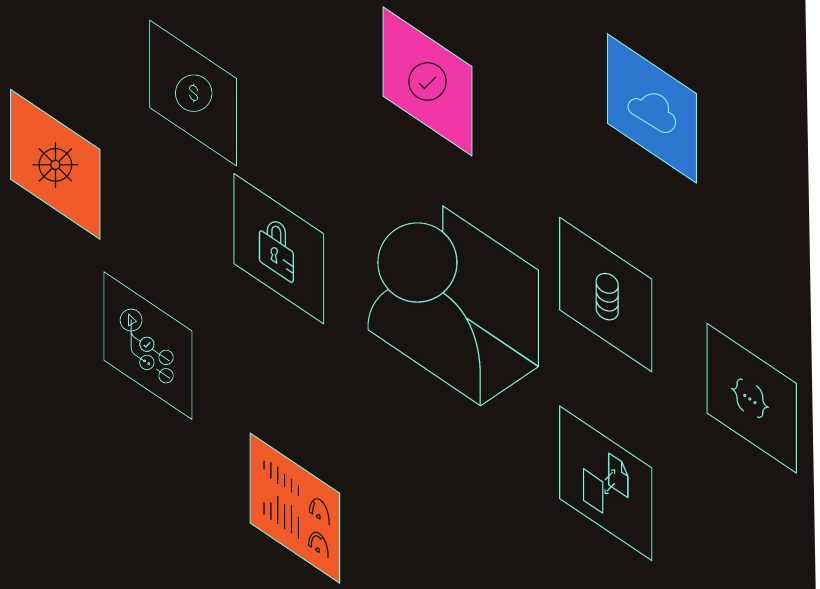
Feeling onboarded?

"For me, it's when I'm independent to do stuff on my own. A feeling of autonomy'"

“Caring about the people that are just walking in the door right now – I think that just speaks volumes to the culture.”

“ My Spotify onboarding has been the best out of all companies I've worked for”

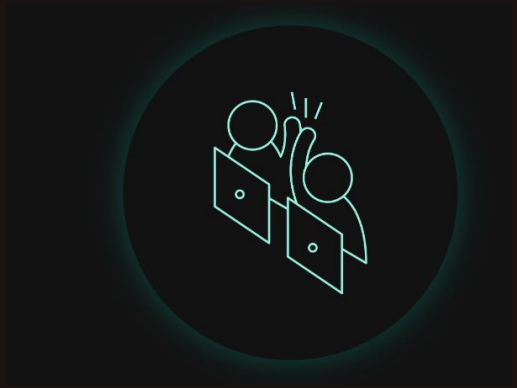
What’s next?



Opportunities to gain new skills and new experiences

- How do I get the exposure to the new tech stacks/groups ?
- What's the best way to pick up new skills on the job?
- How do I find someone who can help?

Harnessing Hack energy to create Skill Exchange



An internal marketplace for on-the-job learning opportunities including mentors, hacks, embeds, and more

Benefits:

- Share your own and seek out other's expertise
- Gain new and deepen existing skills
- Foster meaningful connection and collaboration

75%

of R&D uses Skill Exchange monthly

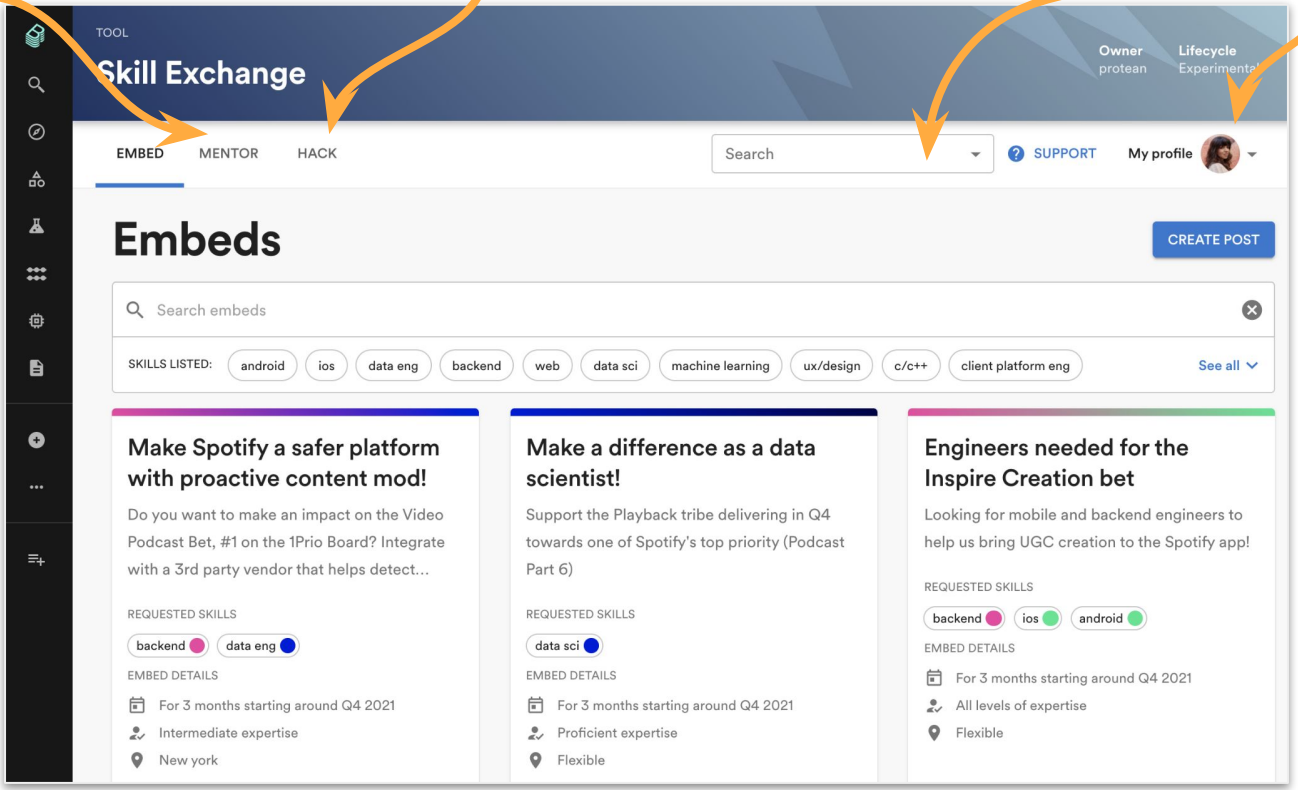
Skill Exchange product suite

Mentorships + pairing

Hacks + hack events

Skill + profile search

Personal skill profile



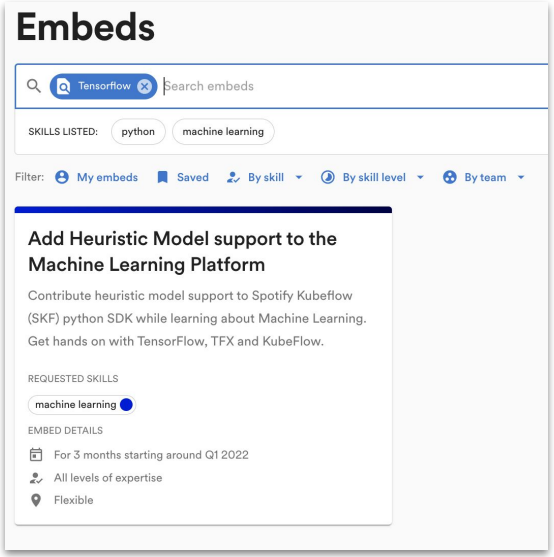
Reflect on and share your expertise with others

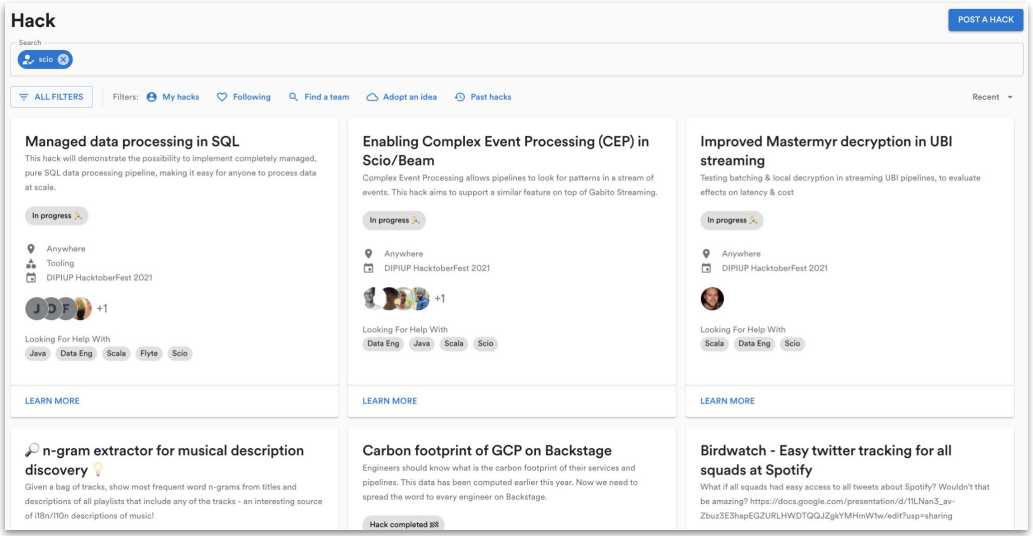
- Input skills to see your “shape” and what you’re learning
- Use skill scales to give yourself an objective proficiency level
- View personal GHE data
- View courses you’ve taken

Find opportunities to gain new skills and new experiences

62%

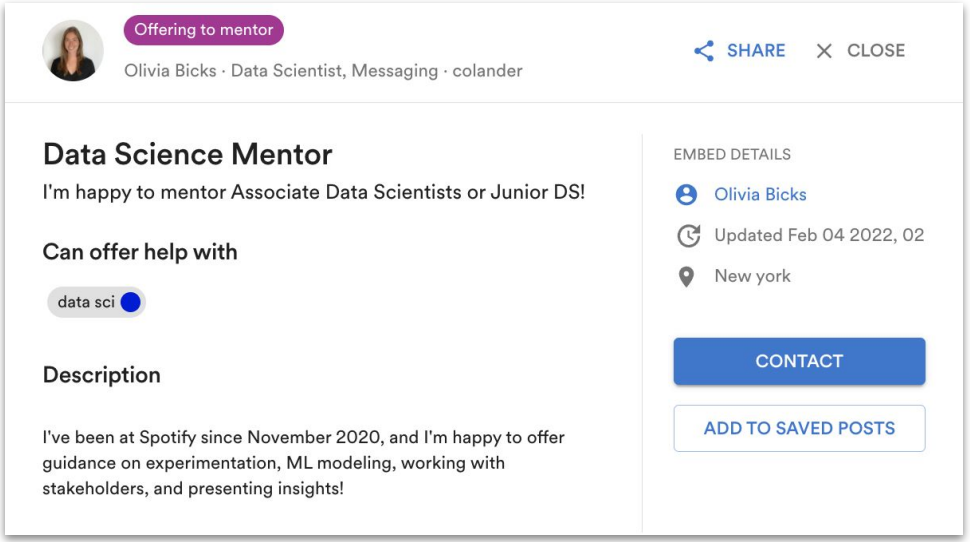
Less likely to leave the company within one year

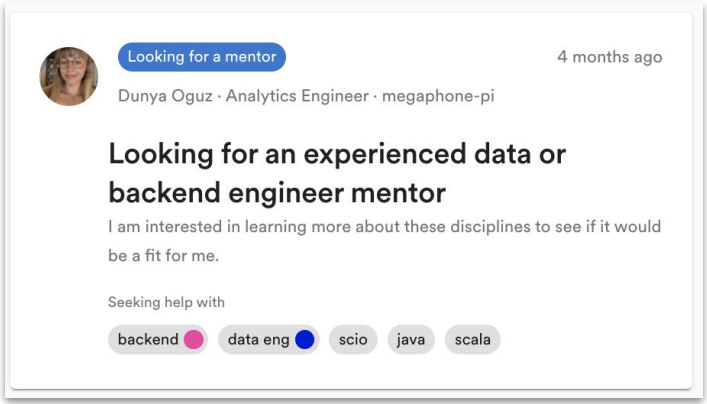


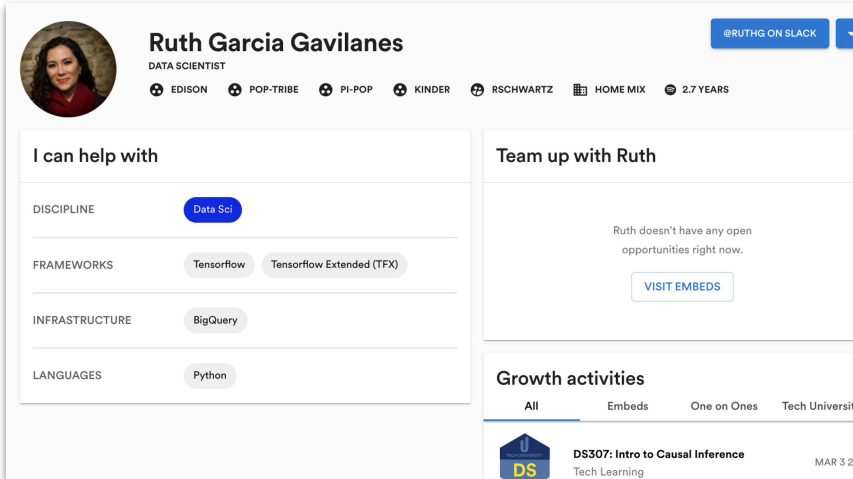


Seek/offer mentorship

- Serve as an expert
- Mentor others
- Add areas of expertise to your profile

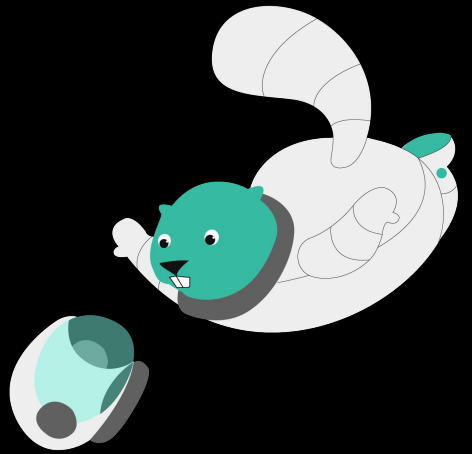






All Learners

Attrition	**15%**	less likely to leave the company after one year
Career Growth	**21%**	more likely to earn a promotion within one year
Productivity	**19%**	more likely to report high productivity
Flow	**17%**	more likely to report a high frequency of achieving flow
Velocity	**9%**	more likely to report satisfaction with their velocity



The Spotify Plugins for Backstage bundle

RBAC

Control access to actions and data in Backstage

Soundcheck

Ensure quality, reliability, and alignment of software development with codified checks and guidance

Skill Exchange

Build an internal marketplace for learning and growth opportunities within R&D

Pulse

Collect data that drives continuous improvements to your R&D tooling, processes, and culture

Insights

Identify, understand, and benchmark Backstage usage trends

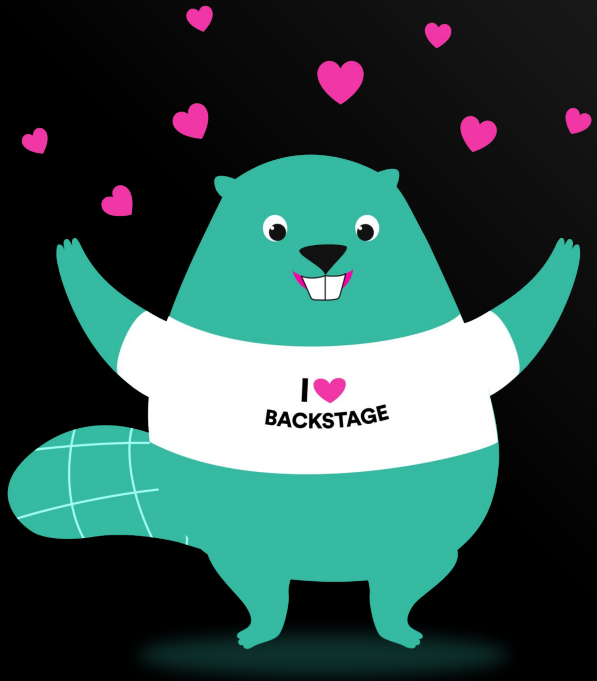
Backstage

Join the **Backstage** community

https://backstage.io
https://backstage.spotify.com

Happy Developers write Happy Code!

- Focusing on developer onboarding and career mobility is a worthwhile investment
- Focus on the measurable goals
- Talk to your engineers early and often



Questions?

goto;

Don’t forget to
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in the **GOTO Guide app**