udemy

Lessons Learned after 190M Lessons Served

Disclaimer

UDEMY BY THE NUMBERS

We serve a huge, global community of students and instructors and we're growing every day.

11,000,000+
students

40,000+
courses

20,000+
instructors

50,000,000+
course enrollments

9,000,000+
Minutes of Video Content

80+
Course Languages

Lesson 1 - Keeping a Culture Alive

Culture is a foundation

- Preserving and passing it along is essential
- A good onboarding process helps with that
    - Get from developer to Udemy engineer in a short time
    - Automation makes life easy-ish
    - Standardized development environment (with VMs, Docker)
    - You can really deploy the app on day #1 (I did on week #1)
- Dogfooding - internal courses using our own platform
- Communications - hundreds of people on 3 continents, all need to be on the same page
    - Slack (we just moved from Hipchat)
    - Standups with hangouts
    - All meeting rooms hangout-capable
- Use automation to enforce it
    - Love for standards (PEP-8) and automated tests is enforced by our faithful robots
    - You can't push bad code
    - You can't merge questionable code
- We use custom tools to make accidents less likely
    - … even though it doesn't always work

udemy

Room for improvement

- We currently have a shared database used in some development and testing

    - All kinds of odd side-effects

- We are moving to small individual DBs for everyone

- We constantly make small improvements to the dev environment, adding code that helps debugging etc

udemy

Lesson 2 - Measure Everything, in bulk

Metrics, metrics, metrics

- Applications collect relevant metrics all the time

- Measuring at scale - stop tracking individual events, start tracking trends.

    - Sentry and Datadog

    - Google Analytics

- A-B tests and feature flags

    - *KNOW* how something will impact us

    - and explore what-if scenarios

- Be mindful of distributions

- Measure quickly - large user bases can amplify trends

udemy

Lesson 3 - Question Everything

"They (Netscape) did (delay a new version by 3 years). They did it by making the single worst strategic mistake that any software company can make:

They decided to rewrite the code from scratch"

–Joel Spolsky, "Things You Should Never Do, Part I"

Moving from PHP

- A custom-built framework

- That new hires needed to be trained on

    - Increasing onboarding costs

    - Long ramp-up time

- Without adequate test support

    - Maintenance becomes walking on a minefield

    - Developers start to optimising for avoiding breakage rather than the best (most reliable, most readable, most performant) solution

udemy

Choosing the way out

- Evaluated multiple options

    - Laravel

    - Node

    - Django

    - Rails

    - Play

This was a serious project

What Udemy got in the end

- Django-based application

    - Legacy-free

    - Python 3

- Much shorter developer onboarding

- Great test coverage (88%)

- Lots of new features

- A consistent codebase

- And some scar tissue where PHP and Django coexisted

    - Odd table names (that's really a minor thing)

    - Sometimes, we need to fight the opinionated framework we chose

udemy

What Udemy learned

- It takes a while (2 years to complete)

- It's a serious commitment (30% of the engineering team on it)

- Incremental (avoid tempting fate)

- It's easy to lose sight of the goal and get demotivated

- Release early, release often (so that course can be changed quickly)

- Enforce good practices (flake8, testing, mandatory coverage)

udemy

Lesson 4 - The Mission Matters

Help anyone learn anything

Anyone can teach something
to someone else

Impact

1 in 3 Udemy students are starting or growing their own businesses

Lots of instructors are full-time Udemy instructors

udemy

This is Len

Len has been with Udemy from the start. After a career in copywriting, he got involved with Udemy to keep busy, share his passion, and slide gracefully into semi-retirement. He's now got a second career, having taught more than 50,000 students across his 11 courses.

By enabling this transformation in education, we empower people to change their lives

Thank you

udemy

@udemy

www.udemy.com

importthis40