

Lessons Learned at Duolingo Using Gen AI

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what i'll cover



Background on Duolingo

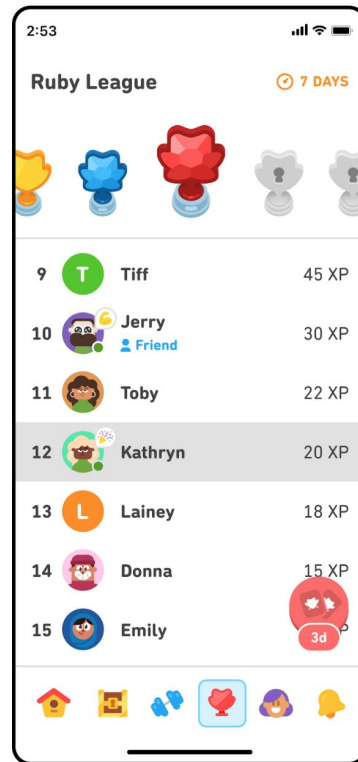
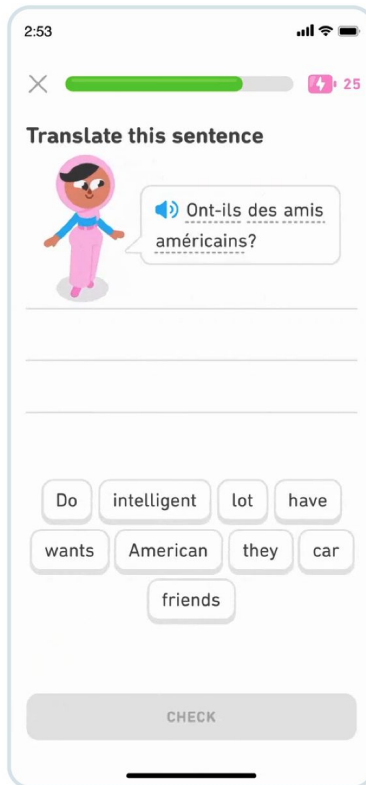
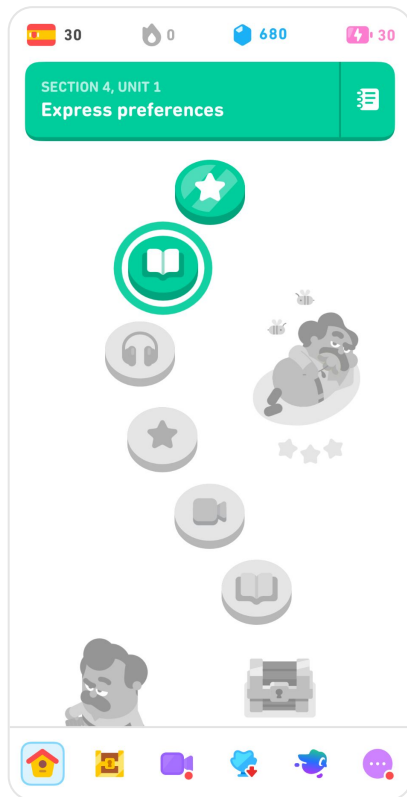


What Gen AI unlocked



Lessons learned

Background on Duolingo



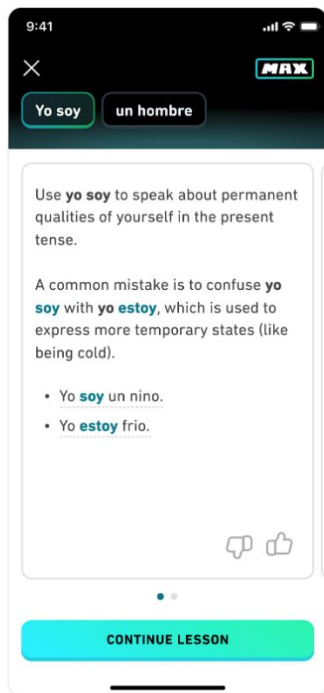
Duolingo has always used AI

Examples

- Personalized lessons
- Notifications
- Ad selection

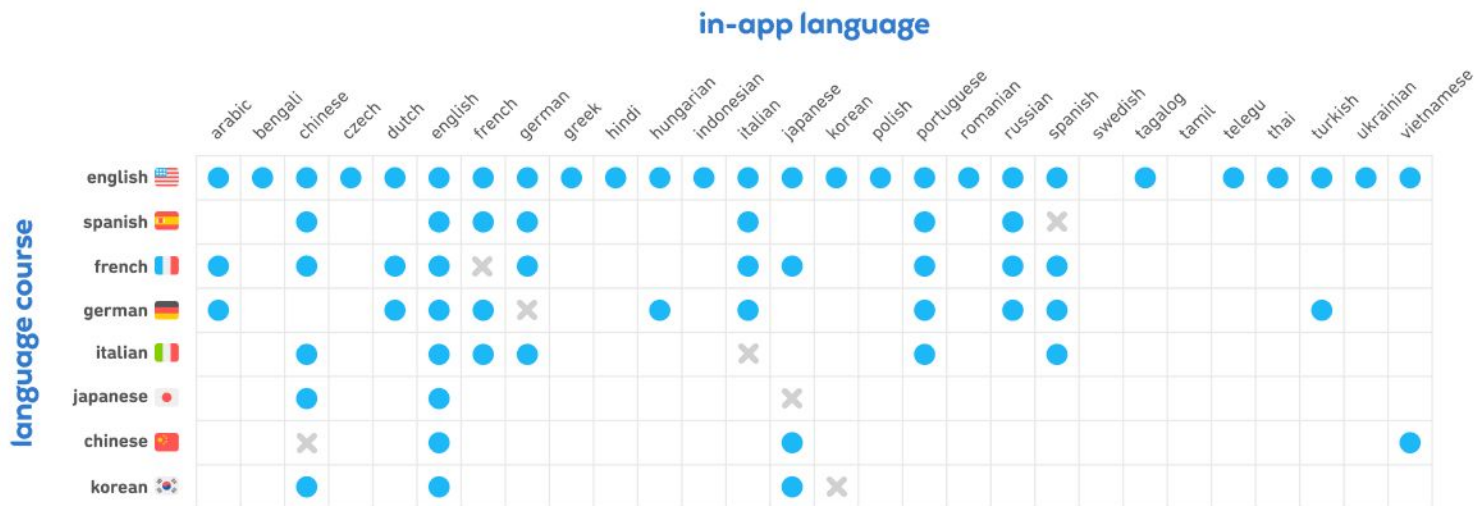


What GenAI unlocked

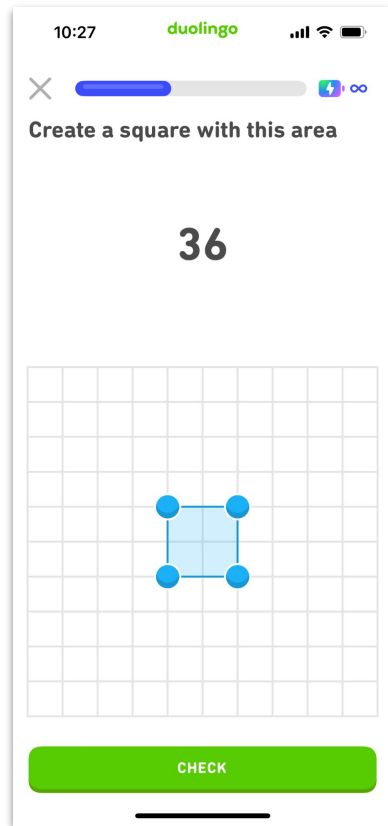
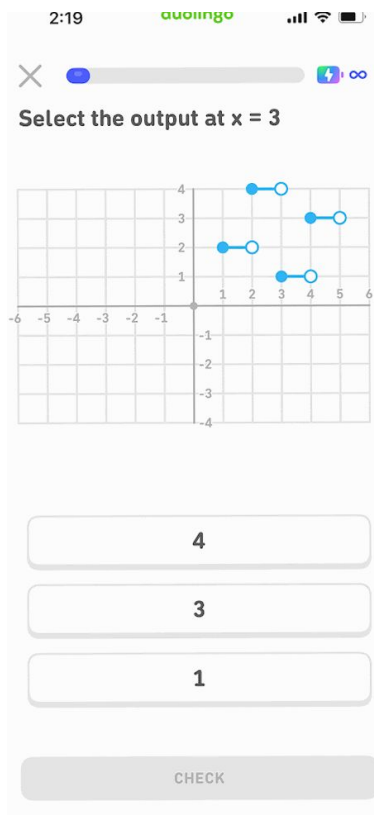
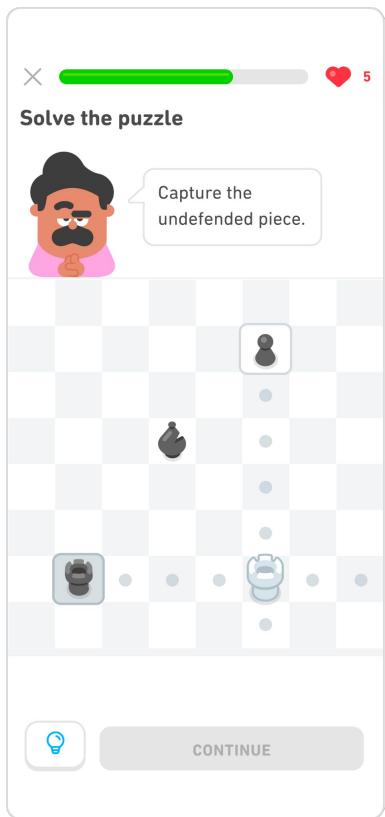


What GenAI unlocked

172 new Courses teaching our top 9 languages



What GenAI unlocked



lessons learned

business impact >> productivity impact

Productivity impact

- 2X or more speedup
- Biggest gains: 0 to 1

Business impact

- Innovation & competitive advantages
- New levers to improve our products

communicate clear principles on the use of AI

Golden rule @ Duolingo: we use AI to serve our learners and advance our mission

- Quality matters
- Skate to where the puck is going to be
- No AI just for AI's sake
- Watch out for the hype

Third party vs. self-hosted vs. on-device

- On-device: pick your use cases carefully
- Self-hosted: primarily for business reasons
- Third party: bleeding edge & ease-of-use

pros & cons of fine-tuning

Pros

- Better performance on your task
- Cost savings

Cons

- Brittleness
- Interaction with feature development cycle

invest in data annotation and evals

Stability of gen AI applications w/evolving LLMs and product spec is a new challenge

Data annotation: input for fine-tuning & training evaluators

Evals for testing

- changes to prompts
- model switching
- feature changes

invest in AI platform early

- Hire team ahead of perceived need
- Build (or buy) an LLM gateway
- Build (or buy) an LLM eval service
- Build (or buy) an annotations service
- Don't try to standardize too early

build vs. buy vs. wait

- Build: is the service critical to your business/product?
- Buy: are there established solutions?
- Wait: re-evaluate every 3-6 months

on working with AI vendors

- Pilot
- Partner on product development
- Security review
- Switching costs
- 6 month contracts
- Budget forecasts

q&a



stay in touch!



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