

AI, GLAD & Organizational Design

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highlighting major AI change
for devs & orgs since 2020,
not my “new fad”

AI undergrad & grad focus
since late 1970s

paid full-time AI developer &
teacher starting 1986

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2020 LeSS Conference Keynote: AI Impact

A screenshot of a video player showing a keynote presentation slide. The slide is from UX Collective and features the text: "Let's talk about that GPT-3 AI tweet that shook designers to the core" and a quote: "We're going to get automated — it's just a matter of time." The video player interface includes a search bar, a play button, and a progress bar. The video title is "Learning Adaptiveness - Craig Larman" and the channel is "Large-Scale Scrum (LeSS)".

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My Thesis...

a 2nd-generation AI that automatically
learned from a 1st-generation AI ...

Learning From Knowledge Systems

by
Craig Larman

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Demo

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demo for tasks done
traditionally by
product mgrs,
analysts, UI/UX
designers, testers,
coders, DB designers

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GLAD

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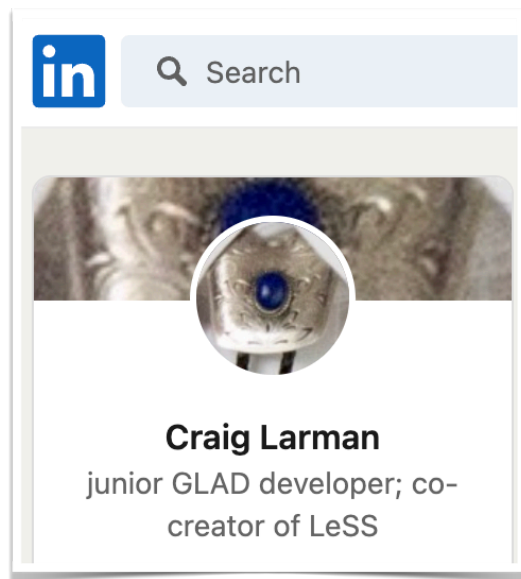
for development, we need a **short new term** for “AI tools that 1) generate, & 2) talk/teach” ...

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GLAD

Generative-ai & LLM-Assisted Development

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Social Impacts

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for example...

The image shows two overlapping documents. The top document is a research paper from Google DeepMind, dated February 16, 2022, titled "Accelerating fusion science through learned plasma control". The bottom document is a news article from MIT News, dated January 12, 2022, titled "MIT-designed project achieves major advance toward fusion energy". To the right of the documents is a 3D visualization of a tokamak fusion reactor, showing its complex magnetic confinement structure with green and red lines indicating plasma flow or control points.

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Org Design Impacts

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Als are *finally* doing
“knowledge worker”
routine expertise

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Automation Supplanting Humans

1. routine math (1940s)
2. routine movement (1940s)
3. routine info workflows (1950s)
4. **(next) routine expertise (2020s)**
>with powerful **task-specific** Als

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Routine Single-Specialist Expertise

- > product management
- > business requirements/analysis
- > UI/UX designer
- > front end developer
- > DB designer
- > “payment service” developer
- > tester

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novelty of knowledge work



routine
expertise

learning
expertise

*has/will be
automated
by AIs*

*human value-
add (for now)*

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Routine Single-Specialist Expertise

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routine
expertise

*has/will be
automated
by AIs*

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“AIs won’t replace
our narrow
single-specialist
routine jobs”

(says the wishful thinker)

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“I will simply work more
efficiently in my single-
speciality, with AI.”

(says the wishful thinker)

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really? ...

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story: Lisbon coach &
automated testing

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18 minutes!

**Web Summit Rio 2023: Building
an app in 18 minutes with
GitHub Copilot X**

GitHub CEO Thomas Dohmke demonstrated the power of GitHub Copilot X live on stage.

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CUSTOM WEBSITES GENERATED BY A.I.

In 30 Seconds

Get a custom AI-built digital presence with Chat GPT and gain access to our

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and these are stories
of baby beta-products

imagine in “3” years

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BIG Idea

AI tools will allow one to
produce **10X-1000X**
faster, not just “20%”

(with much less effort,
errors, & prior expertise)

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imagine a single-specialist UI/
DB designer that can now do

300 person-days of output

...in 3 or 30 person-days

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300 person-days of output

->

3 or 30 person-days

what will the “UI/DB designer” do for the remaining “297” days?

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what will the “UI/DB designer” do for the remaining “297” days?

perhaps they will create LOTS MORE UIs & DBs?

NO, because there is no customer demand

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what will the “UI/DB designer” do for the remaining “297” days?

perhaps fire all but 1 designer, who “does all the design”?

1. **UNLIKELY**, because they still have “200” days free
2. **UNLIKELY**, because other developers can use these tools to quickly learn & create designs
3. **UNLIKELY**, because many companies will strive to avoid massive layoffs
4. **UNLIKELY**, because it would create unnecessary delays and weak feedback loops

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novelty of knowledge work



routine expertise

has/will be automated by AIs

learning expertise

human value-add (for now)

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BIG Idea

GLAD makes it much easier to **learn** new skills & tools

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if a “UI/DB Designer” can much more easily/quickly learn & create...

automated testing
front-end dev
etc

then...

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BIG Idea

1. primary
2. secondary
3. tertiary
skills learning

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if “DB Designer” does DB tasks for “10” days per year, and learns/does UI design, programming, testing, etc for “290” days...

why do they have the single-specialist job title “DB Designer”?

why is the career path “DBD-1, DBD-2, ...”?

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BIG Idea

structural change:
formally in HR titles:
broad job title, with career
path **multi-learning**

e.g. **Product Developer**

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Then, Not a Team of *Single-Specialists*



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A Team of ML PDs, with AI assistants

multilearning product developer
multilearning product developer
multilearning product developer
multilearning product developer
multilearning product developer
multilearning product developer
multilearning product developer
multilearning product developer
multilearning product developer

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this is not a new idea...

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Harvard Business Review

LEADING TEAMS

The New New Product Development Game

by Hirotaka Takeuchi and Ikujiro Nonaka
FROM THE JANUARY 1986 ISSUE

Moving the scrum downfield

From interviews with organization members from the CEO to young engineers, we learned that leading companies show six characteristics in managing their new product development processes:

- 1 Built-in instability
- 2 Self-organizing project teams
- 3 Overlapping development phases
- 4 "Multilearning"
- 5 Subtle control
- 6 Organizational transfer of learning

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"This won't change
manager roles"

(says the wishful thinker)

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if there is no "DB Design"
group (since no "DB
Designers"), is there a...

DB Design manager?

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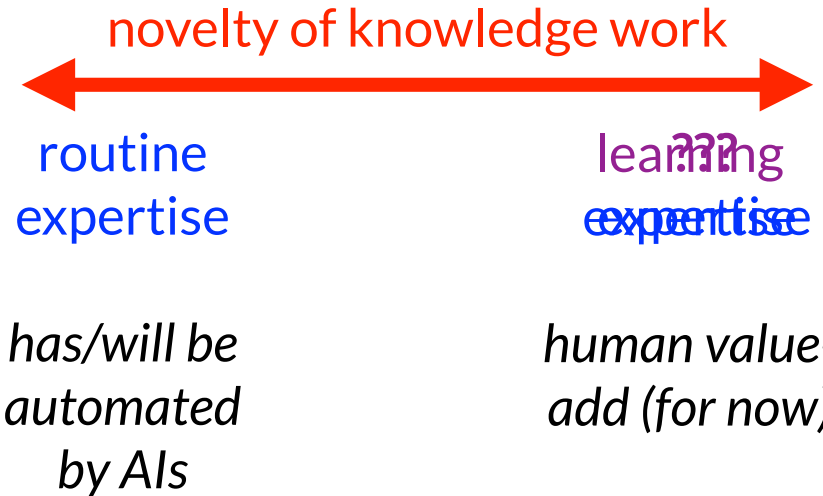
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“it’s 2023. here’s
our official job
categories in our
modern high tech
company with
leading-edge HR
& leadership:

business analyst
ui designer
front-end dev
db designer
...”



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MAJOR AI Paper: Towards *Learning/Adapting AIs*

On the Measure of Intelligence

François Chollet *
Google, Inc.
fchollet@google.com
November 5, 2019

“The intelligence
of a system
is a measure of its
skill-acquisition
[learning] efficiency”

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increasingly, job skill
will be
skill in multi-learning
over
skill in single-doing

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Close

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welcome to
connect with me!

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structured Q&A

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