THE FUTURE OF SOFTWARE ENGINEERING FOR AI-ENABLED SYSTEMS?

(closing remarks)

Christian Kaestner

WHAT ARE NEW SOFTWARE ENGINEERING CHALLENGES?

Gaps? Research needs? Adaptation of existing methods?

ARE SOFTWARE ENGINEERS DISAPPEARING?

Tweet

see also Andrej Karpathy. Software 2.0. Blog, 2017

Speaker notes

Andrej Karpathy is the director of AI at Tesla and coined the term Software 2.0

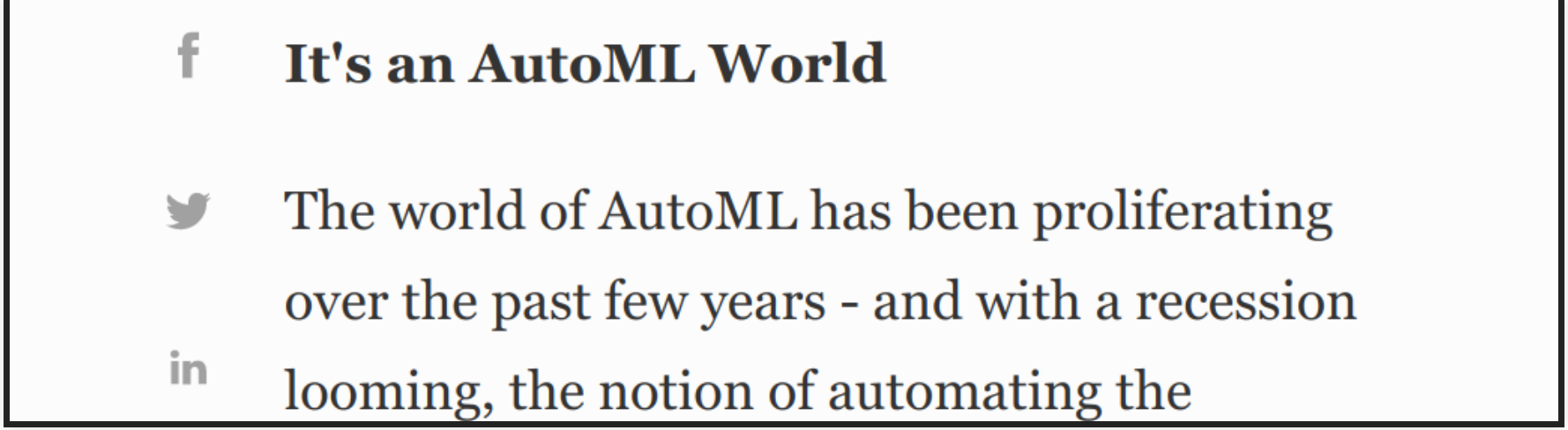
ARE DATA SCIENTISTS DISAPPEARING?

Forbes

1,616 views | Apr 7, 2020, 10:10am EDT

AutoML 2.0: Is The Data Scientist Obsolete?

Ryohei Fujimaki Contributor
COGNITIVE WORLD Contributor Group ⓘ
AI
Ryohei Fujimaki Ph.D. is founder and CEO of dotData



Ryohei Fujimaki. AutoML 2.0: Is The Data Scientist Obsolete? Forbes, 2020

ARE DATA SCIENTISTS DISAPPEARING?

However, AutoML does not spell the end of data scientists, as it doesn't "AutoSelect" a business problem to solve, it doesn't AutoSelect indicative data, it doesn't AutoAlign stakeholders, it doesn't provide AutoEthics in the face of potential bias, it doesn't provide AutoIntegration with the rest of your product, and it doesn't provide AutoMarketing after the fact. -- Frederik Bussler

Frederik Bussler. Will AutoML Be the End of Data Scientists?, Blog 2020

SE4AI RESEARCH: MORE SE POWER TO DATA SCIENTISTS?

SE4AI RESEARCH: MORE DS POWER TO SOFTWARE ENGINEERS?

Bogdan Vasilescu
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Replying to @p0nk and @AndrzejWasowski

Virtually *everyone* is / will soon be building ML applications. Only few can afford dedicated software engineers to team up with, or SE education for themselves. It would be more inclusive to build SE into the ML processes more fundamentally, so that everyone could build better

12:27 PM · Jun 19, 2020 · Twitter for iPhone

ANALOGY

ANALOGY

(better tools don't replace the knowledge to use them)

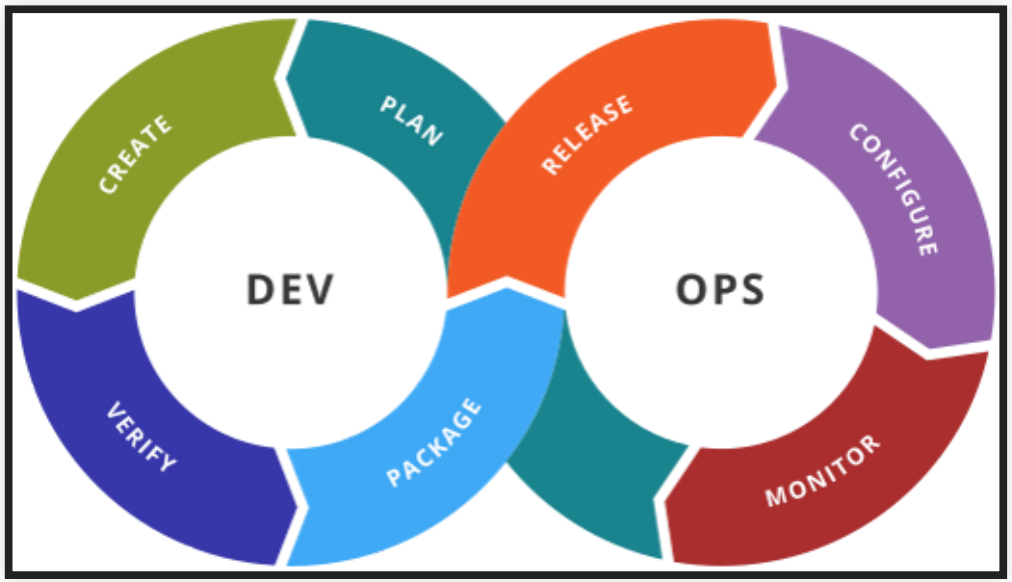
MY VIEW

This is an education problem, more than a research problem.

Interdisciplinary teams, mutual awareness and understanding

Software engineers and data scientists will each play an essential role

DEVOPS AS A ROLE MODEL



Joint responsibilities, joint processes, joint tools, joint vocabulary

FEEDBACK

SOME THINGS WE TRIED

- Clear specifications for homework, pass/fail grading
- Open-ended reading quizzes
- Individual assignments and readings in pairs
- Team project mostly in second half of semester
- Guest lectures

FEEDBACK

- What was useful?
- What could be improved?
- Where did we overdo it with the homework?
- Ideas for better remote teaching?

THANK YOU!