

# THE FUTURE OF MACHINE LEARNING IN PRODUCTION?

(closing remarks)

Christian Kaestner

# 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?



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*

## **f It's an AutoML World**



The world of AutoML has been proliferating over the past few years - and with a recession looming, the notion of automating the



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**

@b\_vasilescu



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)*

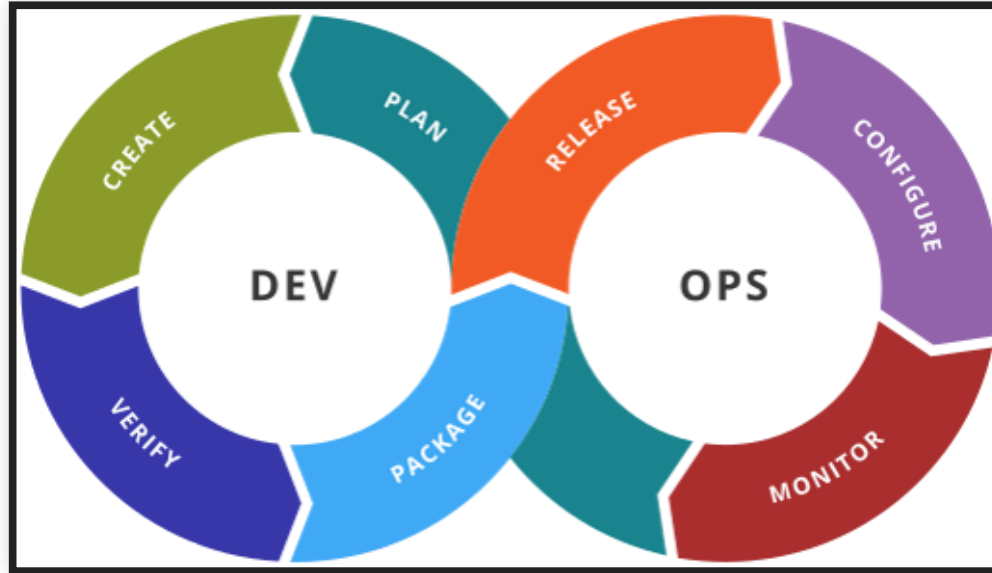
# MY VIEW

*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

# **ONE LAST TIME: TRANSCRIPTION**

00:00  Offset 00:00 01:31:27

Play



Back 5s

1x

Speed



Volume

## NOTES

Write your notes here

Speaker 5 ▶ 07:44

Yeah. So there's a slight story behind that. So back when I was in, uh, Undergrad, I wrote a program for myself to measure a, the amount of time I did data entry from my father's business and I was on windows at the time and there wasn't a function called time dot [inaudible] time, uh, which I needed to parse dates to get back to time, top of representation, uh, I figured out a way to do it and I gave it to what's called the python cookbook because it just seemed like something other people could use. So it was just trying to be helpful. Uh, subsequently I had to figure out how to make it work because I didn't really have to. Basically, it bothered me that you had to input all the locale information and I figured out how to do it over the subsequent months. And actually as a graduation gift from my Undergrad, the week following, I solved it and wrote it all out.

Speaker 5 ▶ 08:38

And I asked, uh, Alex Martelli, the editor of the Python Cookbook, which had published my original recipe, a, how do I get this into python? I think it might help

How did we do on your transcript?



# FEEDBACK



# SOME THINGS WE TRIED

- Clear specifications for homework, pass/fail grading
- Open-ended reading quizzes
- Individual assignments and readings in pairs
- Credit for social activities

# FEEDBACK

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



# THANK YOU!

