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1.3 Assignment

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DevOps: A Brief History

The term “DevOps” gained traction in the software industry in the 2010s and, since then, has had a revolutionary impact on the way companies approach software development and deployment. DevOps principles center around collaboration and continuous integration. It aims to optimize the development process to allow developers to deliver value to clients as fast as possible. However, despite its official christening by Patrick Debois in the late 2000s, the philosophical roots of DevOps can be traced back to the early 2000s with the creation of “The Agile Manifesto” and even further to the early 1900s in the form of “The Lean Movement.”

The ideologies that shaped the lean movement began long before the rise of software, rooted in the automobile manufacturing industry of the 20th century. The lean movement began in 1913 when Henry Ford, founder of the Ford Motor Company, attempted to improve the quality of his products by eliminating waste and optimizing the workflow in his manufacturing plant (Six Sigma Daily, 2019). However, there was one major flaw in Ford’s methodology: it did not account for product variations. This was when Kiichiro Toyoda revealed the full potential of Ford’s methodologies in 1930 by introducing his idea of “Kaizen” or “continuous improvement.” Then, in 1990, with the release of “The Machine That Changed The World,” a book that details Toyota’s methods, Lean was spread to the rest of the world (3Pillar, 2024).

However, as technology grew to the point where most of the population had personal computers in their homes, so did the demand for software to run on them. Unfortunately, software companies struggled to keep up with this demand as it would take up to seven months to complete and deploy a completed project following the standardized, linear “Waterfall”

method (Armel, 2024). It became clear that companies needed to reconsider their approach to software development. In 2001, advocates of Lean, Scrum, and similar production methods came together to create the “Agile Alliance” and the “Manifesto for Agile Software development.” This manifesto functioned as an updated version of lean principles combined with other popular practices at the time, like Scrum and Kanban (3Pillar, 2024). Agile emphasizes trust, collaboration, and global learning to achieve early and continuous value delivery (The Agile Alliance, 2015).

Soon enough, the age of automation arrived in the software development industry with the release of new automated tools built to assist programmers with repetitive, tedious processes such as testing and deployment. Although the concept of rapid, continuous delivery had been a key benefit of the agile movement for almost a decade, productivity within dev teams reached a new peak as developers sought to increase its efficiency with automation. Where once developers had to push changes from development to operations manually, they could now do so automatically (Redhat, 2023). To name this new methodology, the term “DevOps” was coined by Patrick Dubois in 2009 (Modi, 2022), and it spread rapidly in the software industry in the 2010s as more companies began to focus on optimizing the relationship between the development and operations phases of production using automated tools.

In conclusion, although the term itself is relatively new, the true origins of DevOps ideals date all the way back to the early 1900s when two automobile manufacturers looked at their processes and saw an opportunity for improvement. Eventually, these improvements made their way to the software industry with the Agile Manifesto before the implementation of automated tools brought the era of DevOps. However, after discussing the past, one may be curious about the future of DevOps. Especially now that artificial intelligence has become a

prominent force in the software industry. If Agile evolved into DevOps with the help of man-made automation software, will artificial intelligence be able to take these concepts even further?

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