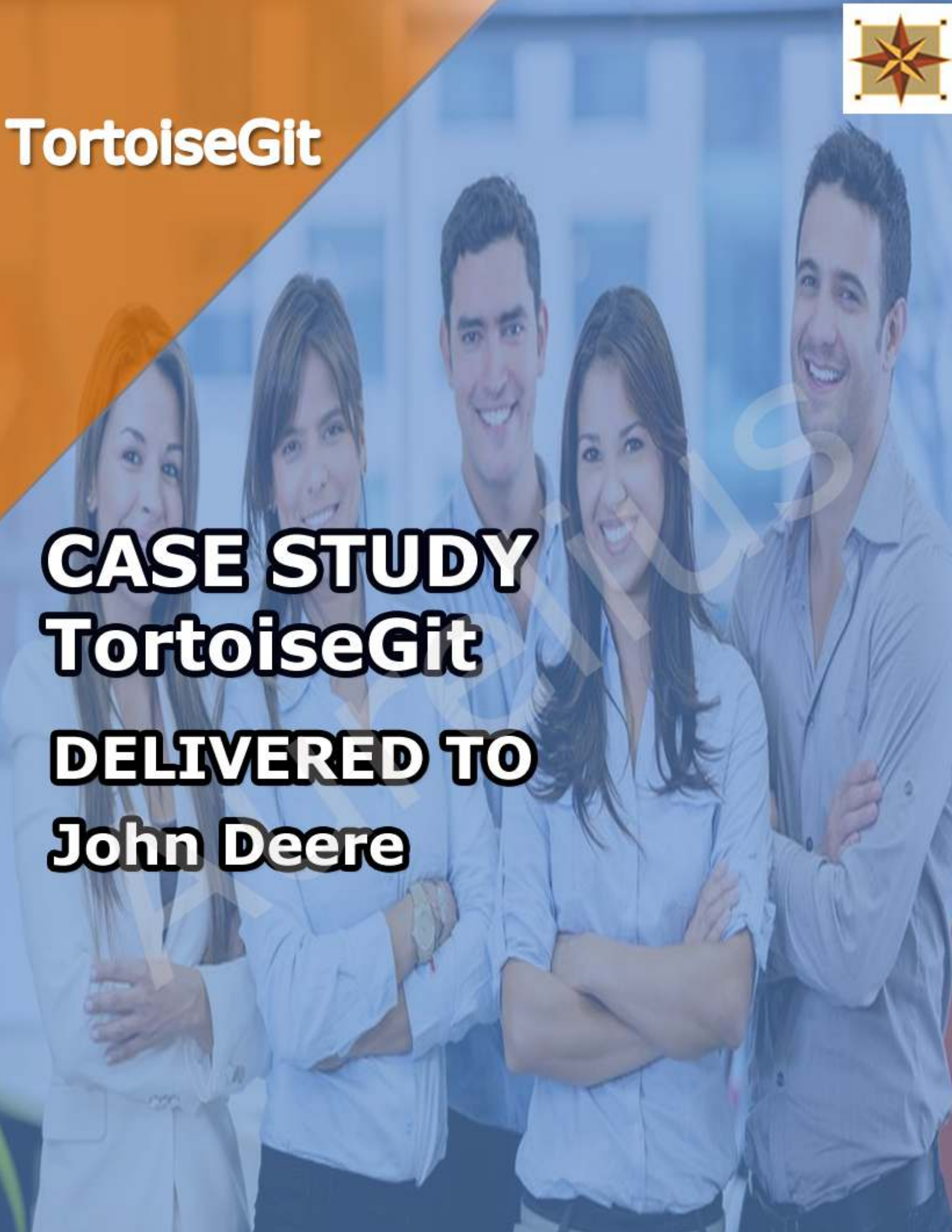




TortoiseGit

CASE STUDY
TortoiseGit
DELIVERED TO
John Deere





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Aurelius



TortoiseGit Delivered to Client John Deere

Client: **John Deere**

Industry: **Automotive & Farm Equipment**

John Deere is an American Organization which develops and manufactures agricultural, construction and forestry machinery along with automotive equipments such as diesel engines, drive-trains and other kinds of heavy equipments. As of 2017, John Deere has been listed as 105th ranked in the fortune 500 American ranking and 407th in the global ranking. Along with conventional products, the company now also provides financial services and several other related activities. As of 2018, Deere & Company employs over 67000 people in their offices worldwide.

The company has also been working on the advanced fronts of technology. They have been experimenting with electric farm tractors and have acquired a company called Blue River Technologies which is based out of Sunnyvale, California and works in Machine Learning being applied to agriculture. Integrating computer vision and machine learning technology enables the farmers to reduce the use of herbicides and optimize the inputs in farming.

Technology: TortoiseGit

Domain: Software development and version control

TortoiseGit is a Windows Shell interface for Git and is based on the Tortoise SVN system. It is an open source system which can be fully built using open source



software. The tool is completely flexible in nature as it does not integrate any specific IDE such as Visual studio, Eclipse or any other and thus can be used for whichever development tools the users use. Regular tasks such as committing, showing logs, diffing two versions, creating branches and tags, creating and patches and so on are inherently easy with this tool.

Developed under GPL, the tool is completely free to be used by anyone and anywhere. This also includes commercial purposes without any restrictions. The source code is freely available and versions can be developed by the user as per their own needs and requirements. The tool also comes with a TortoiseGitMerge utility which can visually compare two files while resolving conflicts. Tortoise Git is available in a large number of languages and preview releases are made before every release to find bugs early on which will lead to more stable official releases.

Challenges Faced By the client:

John Deere is currently looking into advanced technological developments and moving into the domains of digital development such as Machine Learning and electrical vehicles. Such digital domains require heavy software development with version control of the highest efficiency in order to make sure that the products being delivered are effective and can be used in their hardware.

John Deere was currently facing challenges in their software development procedures for their various verticals including automotive, financial and advanced technologies. In order to make Version control is a very essential and required segment of the software development process and TortoiseGit is one of the leading version control software tools which is being used across the globe in few of the top organizations. The main challenge faced by the client was the integration of this tool in their current software development system along with the modification of the source code of TortoiseGit to suit their specific software



development needs. Another challenge was the inculcation of practical know-how and hands-on knowledge in the development of software systems through version control. Integrating the tool in their own system by changing the source code and also gaining hands-on practical experience can only be delivered by a professional who has worked for long in the same domain and has immense experience of the industry.

Another challenge that the client faced was the fulfillment of specific needs. The client works in the Automotive domain and thus their software development requirements are not conventional in nature. It was desired that the subject matter expert providing the knowledge resources and information also has knowledge of the Automotive domain so that the end results can be achieved as per the end goal requirements.

The company needed complete control over their software development operations without relying on any third party vendors. This means that they needed their own workforce to be comprehensively knowledgeable in the tool and be able to deliver the required services. All the aforementioned challenges had to be overcome and the workforce enabled.

Why Aurelius

Given the specific challenges which could not be targeted through conventional training programs, Aurelius was brought into picture to construct a insourcing solution which can deliver the client's needs with utmost efficiency and make sure that the end-goals are met.



Aurelius was able to understand the end goals and consequentially search for the perfect subject matter expert all over the globe which not only was well versed in the TortoiseGit technology but was also knowledgeable in the automotive and manufacturing domain. The SME was thus able to synchronize correctly with the workforce and provide them the knowledge resources by being on the same page.

Extensive lab sessions were devised under the guidance of the SME to make the workforce well versed in the tool and make sure that they can perform troubleshooting operations and undergo operational practices. The insourcing solution was constructed to be a perfect amalgam of theory and practical understanding including fundamental concepts and the finer details of practical application.

Aurelius provided complete onshore and offshore support to the client through dedicated tasks team working round the clock to deliver the services and solving any issues as and when they arise. The on-shore team was present throughout the solution delivery and made sure that all the requirements of the client are met.

With Aurelius, the client gained the advantages of legacy integration and the in-depth knowledge base that Aurelius has inculcated over a decade. The knowledge resources and the tools are sourced from all over the globe and it is made sure that they are of the global industry levels. It becomes even more important in case of a client like John Deere which has a global market and global industrial customers at all levels and for all shapes and sizes.



Solution and Post Solutions Benefits

Post Solution completion, the client is experiencing increasing efficiency in software development procedures with data loss and versioning mistakes decreased to almost nil. This has directly led to decrement in the delivery time of the software systems and further increase in the revenue generation due to saved man-hours spent in version control. This has directly related to the ROI that the client has gained on this solution which is north of 35% in terms of profit percentage increase. The client gained break-even on their investment within a few weeks of solution delivery and have ever since been gaining increased profit and revenue owing to the enabling of their own workforce.

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