

IMPROVING THE SALES OF MAJOR COMPONENT IN BIG
MACHINE REMANUFACTURING USING TOOLS MACHINE
LEARNING

By

BAYU NOVIANTO FERRY

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SWISS GERMAN UNIVERSITY

The Prominence Tower, Alam Sutera

Jalan Jalur Sutera Barat No.15 Tangerang 15143

Indonesia

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, if contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at my educational institution, except where due acknowledgement is made in the thesis.



Bayu Novianto Ferry

25 August 2025

Student

Date

Approved by:



Dr. Drs. I Nyoman Sutapa, M.Sc.Nat.,

25 August 2025

Thesis Advisor

Date



Assoc. Prof. Dr. Ir. Gembong Baskoro, M.Sc., IPU,
ASEAN Eng., ACPE, APEC Eng.

25 August 2025

Thesis Co-Advisor

Date

Dr. Maulahikmah Galinium, S.Kom., M.Sc.

25 August 2025

Dean

Date

ABSTRACT

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By

Bayu Novianto Ferry

Dr. Drs. I Nyoman Sutapa, M.Sc.Nat., Advisor

Assoc. Prof. Dr. Ir. Gembong Baskoro, M.Sc., IPU, ASEAN Eng., ACPE, APEC Eng.
, Co-Advisor

SWISS GERMAN UNIVERSITY

This study focuses on leveraging advanced analytics through machine learning with big data utilization to create additional revenue streams in the big machine component remanufacturing business at PT XYZ. The main issue identified is a 26% decline in revenue from big machine component remanufacturing compared to 2023. To address this, this study aims to increase revenue of at least IDR 5 billion/month from major component remanufacturing by leveraging big data using Machine Learning. The research methodology adopted the DMAIC framework, which revealed that the failure to achieve sales targets was not due to weak demand, but rather the inability of the current system to capture opportunities. For the result, there has been an additional in average revenue of approximately 12 billion rupiah per month from major component remanufacturing, far exceeding the minimum target of 5 billion rupiah per month. This success is supported by a shift in transaction patterns from reactive to proactive. With this new system, ASC can educate customers about potential unit failures early on and prepare components well before the unit breaks down, ultimately shortening the downtime of damaged units and helping customers implement their production plans.

Keyword: Big Machine Component Remanufacturing, Machine Learning, Sales Prediction, DMAIC, Big Data Utilization, Additional Revenue



DEDICATION

I dedicate this study to my mom, my dad, brother and sister who always love me and give support throughout my life and studies. My wife who always push me in a positive way to finish my study. To all my MME lecturers and my college friend, i am deeply grateful for the experience which remind me to back to school like many years ago. My company and all my boss which has been part of my new journey, thank you for the everything.



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May the knowledge and experience I have acquired serve as a foundation to enhance my potential and allow me to contribute meaningfully to my family, company, nation, and country.

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