

**MODELING OF TRAIN PASSENGER DEMANDS
IN TUGU YOGYAKARTA STATION**

Final Project Report

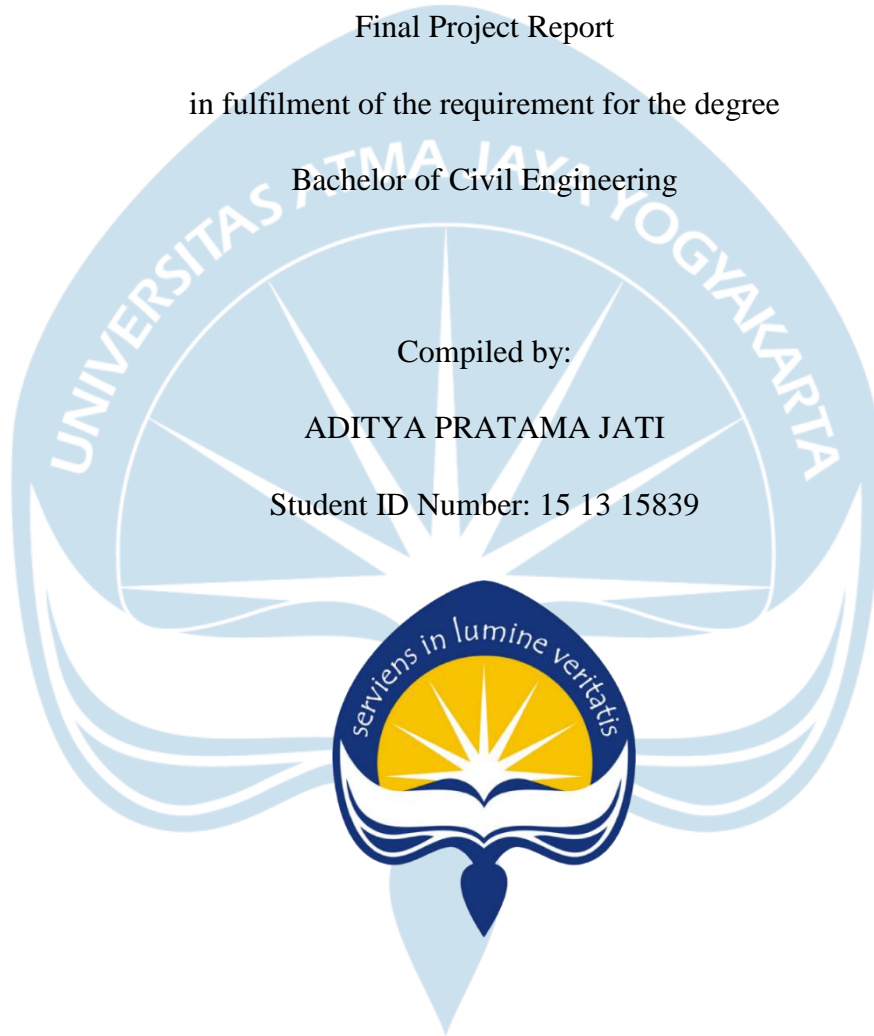
in fulfilment of the requirement for the degree

Bachelor of Civil Engineering

Compiled by:

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INTERNATIONAL CIVIL ENGINEERING PROGRAM

DEPARTMENT OF CIVIL ENGINEERING

FACULTY OF ENGINEERING

UNIVERSITAS ATMA JAYA YOGYAKARTA

2020

STATEMENT

I signed below stating that the final project with the title:

“MODELING OF TRAIN PASSENGER DEMANDS IN TUGU YOGYAKARTA STATION “

It is the result of my own work and not a result of the plagiarism of other people’s work. Ideas, research data, and quotes directly or non-directly derived from the writings or ideas of others expressly provided in this Final Project. If it is proven later that this Final Project is the result of plagiarism, the graduation certificate that I received will be cancelled and returned to Universitas Atma Jaya Yogyakarta.

Yogyakarta, 11 July 2020

Who made the remarks,



Aditya Pratama Jati

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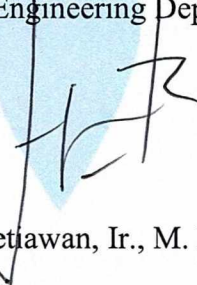


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Final Project Report

MODELING OF TRAIN PASSENGER DEMANDS IN TUGU YOGYAKARTA STATION

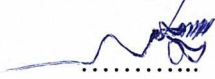




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Sincerely I would like to give the praises and thanks to God, with all of His graces and blessings, I finished the final project report. The purpose of this report with the title “ Modeling of Train Passenger Demands in Tugu Yogyakarta station” is to complete the requirement of undergraduate program (S-1) in International Civil Engineering Program, Department of Civil Engineering, Faculty of Engineering, Universitas Atma Jaya Yogyakarta.

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7. The last but not the least, all of the participants that have took place in my final project report that cannot be mentioned one by one.

I as the writer of this final project report is fully aware that this report is far beyond the word ‘perfect’. Thus, both developing critic and suggestions are expected to make this report better.

Finally, I really hope that the report is really beneficial to all sides and the readers.

Yogyakarta,
2020

Aditya Pratama Jati



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ABSTRACT

MODELING OF TRAIN PASSENGER DEMANDS IN TUGU YOGYAKARTA STATION, Aditya Pratama Jati, Student ID Number 15 13 15839, year of 2020, Transportation Engineering, International Civil Engineering Program, Department of Civil Engineering, Universitas Atma Jaya Yogyakarta.

Train is the most desirable mode of transportation compared to airplane and ship transportation modes with a total number of 246,676,000 passengers in 2019. In Yogyakarta there are two large stations that serve train passenger travel, namely the Yogyakarta Tugu Station and the Yogyakarta Lempuyangan Station. Along with the development of the city of Yogyakarta and economic growth, the number of train passengers in Yogyakarta has been increasing every year. This research was conducted to determine and predict the large number of train passengers in Yogyakarta.

The study was conducted by taking passenger data and data on PT Kereta Api Indonesia and socioeconomic data of the Yogyakarta Special Region Province from the Central Statistics Agency in the Special Region of Yogyakarta Province. The data that was successfully obtained is then processed using the Linear Regression Analysis method and the All Possible Regression (APRE) method.

Based on data analysis, it is obtained that the train passenger demand model at Yogyakarta station used to predict passengers in 2029 is $Y = -2.190E^7 + 215,566.935 X_9$ which provides the best relationship between dependent variables and independent variables. This shows that train passenger demand in Yogyakarta is influenced by the population purchasing ability in DIY.

Key Words: Passenger Demand, Train, Train Station.