

## ABSTRACT

**Aditya Widya Astuti, 2023. IMPLEMENTATION OF JACKKNIFE RIDGE REGRESSION AND LEAST ABSOLUTE SHRINKAGE AND SELECTION OPERATOR REGRESSION IN OVERCOMING MULTICOLLINEARITY IN FORECASTING STOCK RETURN.**

Undergraduate Thesis. Gorontalo. Study Program of Statistics, Department of Mathematics, Faculty of Mathematics and Natural Sciences, Universitas Negeri Gorontalo.

The Supervisors : (1) Nurwan, S.Pd., M.Si(2) Isran K. Hasan, S.Pd., M.Si

*Regression analysis is one of the methods used for forecasting by modeling the independent and dependent variables. The modeling often encounters multicollinearity problems, including conditions where there is a high correlation between independent variables so that the model is biased. One solution to overcome this problem is to use the regression coefficient shrinkage methods with the Jackknife Ridge Regression and the Least Absolute Shrinkage and Selection Operator (LASSO) Regression method. The research aimed to overcome the multicollinearity in the model used to forecast stock return of PT J Resources Asia Pasifik for the January-June 2022 period. In accordance with the analysis carried out, the best model to forecast was the LASSO regression model with an MSE value of 0.50079 and an adjusted  $R^2$  of 76.03%. In addition, the forecasting result with this model created a high level of and fairly good forecasting accuracy.*

**Keywords:** Jackknife Ridge Regression, Regression, Multicollinearity, Stock Return



## LEMBAR PENGESAHAN

Skripsi yang berjudul "**IMPLEMENTASI REGRESI JACKKNIFE  
RIDGE DAN REGRESI LEAST ABSOLUTE SHRINKAGE  
AND SELECTION OPERATOR DALAM MENGATASI  
MULTIKOLINEARITAS PADA PERAMALAN RETURN  
SAHAM**"

Oleh

**ADITYA WIDYA ASTUTI**  
**NIM. 413419035**

Program Studi Statistika

Fakultas Matematika dan Ilmu Pengetahuan Alam

Telah dipertahankan di depan dewan penguji

**Hari, tanggal : Senin, 21 Agustus 2023**

**Waktu : 14.01-15.00 WITA**

**Tempat : Ruang Sidang Matematika**

**A. Pembimbing**

1. **Nurwan, S.Pd., M.Si**  
NIP. 1981105102006041002

Pembimbing I

**Tanda Tangan**

(.....)

2. **Isran K. Hasan, S.Pd., M.Si**  
NIP. 199012112019031009

Pembimbing II

(.....)

**B. Dewan Penguji**

1. **Dr. Ismail Djakaria, M.Si**  
NIP. 196402261990031003

Penguji Utama

**Tanda Tangan**

(.....)

2. **Agusyarif Rezka Nuha, S.Pd., M.Si**  
NIP. 199308102019031009

Anggota

(.....)

3. **Amanda Adityaningrum, S.Si., M.Si**  
NIP. 199205272020122009

Anggota

(.....)

Mengetahui,  
**Dekan Fakultas Matematika dan IPA**  
  
**Prof. Dr. Astin Lukum, M.Si**  
NIP. 196303271988032002