

**PENGEMBANGAN ALGORITMA JARINGAN SARAF  
TIRUAN DENGAN PENDEKATAN DEEP LEARNING UNTUK  
SISTEM REKOMENDASI PEMINATAN PROGRAM STUDI  
PENDIDIKAN TEKNIK INFORMATIKA DAN KOMPUTER  
UNIVERSITAS NEGERI JAKARTA**

**SKRIPSI**



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Skripsi ini Ditulis untuk Memenuhi Sebagian Persyaratan dalam Memperoleh  
Gelar Sarjana

**PROGRAM STUDI PENDIDIKAN TEKNIK INFORMATIKA  
DAN KOMPUTER  
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## ABSTRACT

RIDWAN ACHADI NUGROHO, *Development of Deep Learning Artificial Neural Network Algorithm for Specialization Recommendation System in Education of Informatics and Computer Study Programme, State University of Jakarta.*  
Preceptor Widodo, M.Kom dan Hamidillah Ajie, S.Si, M.T.

*A student's capability can be determined by the scores that he/she got in their lectures. Those scores should be a reference when choosing between one of three specialization, which is Software Engineering, Computer and Network Engineering and Multimedia at 5<sup>th</sup> semester in Education of Informatics and Computer Study Programme. Deep Learning algorithm is used to find out the suitability of a student's scores to one of the three specialization. Still, Deep Learning algorithm requires certain configuration to achieve the best performance and accuracy. The purpose of this study is to find out configuration that yields the best performance and accuracy. It turns out that the best accuracy that one configuration can get has 96.67% of accuracy, with the configuration of 20000 epoch, 0.001 learning rate, 0 bias and activation function of Rectified Linear Unit (ReLU). Other configuration also yields accuracy more than 90% with the same activation function.*

*Keywords: Deep Learning, machine learning, ReLU, Accuracy, Prediction*