

**PAMANTASAN NG LUNGSOD NG MAYNILA**

*(University of the City of Manila)*

Intramuros, Manila

An Undergraduate Thesis Presented to the Faculty of

Computer Science Department of

College of Engineering and Technology

**Principal Component Analysis  
Based Face Recognition Using Eigenface Algorithm with  
Implementation of Artificial Neural Network with  
Integration of Liveness Detection for Anti-Spoofing Attacks and  
EmguCV for Multiple Real Time Face Detection  
Applied to Automated Attendance Systems**

In Partial Fulfillment of the Course

Research Writing

Degree in Bachelor of Science in Computer Studies

Major in Computer Science

By:

**Salvador, Edilberto Jr., D.**

**Timbol, Vince Kyle D.**

BSCS-CS 4-2

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