BAHÇEŞEHİR UNIVERSITY

FACULTY OF ENGINEERING AND NATURAL SCIENCES
DEPARTMENT OF SOFTWARE ENGINEERING

SEN4931 –SPECIAL TOPICS IN SE I

TERM PROJECT

ZEKİ FURKAN KUTLU

1805029

I. INTRODUCTION

HYPERSPECTRAL (HS) images comprised measurements of electromagnetic energy distributed in hundreds of narrow bands. Due to the rich information in both the spectral and spatial domains, hyperspectral imagery (HSI) hasa wide variety of applications, such as assessment of food quality and safety [1], [2], artwork authentication [3] and examina-tion of drug forgeries [4]. HSI is also employed in biomedicalengineering applications suchas the classification of cornealepithelium injuries [5], extraction of the properties of corneatissues [6] and gastric cancer diagnosis [7]. In addition, HSI is also widely used in many remote sensing applications [8]–[12]including image classification and pattern recognition [13],[14], and spectral unmixing [15].
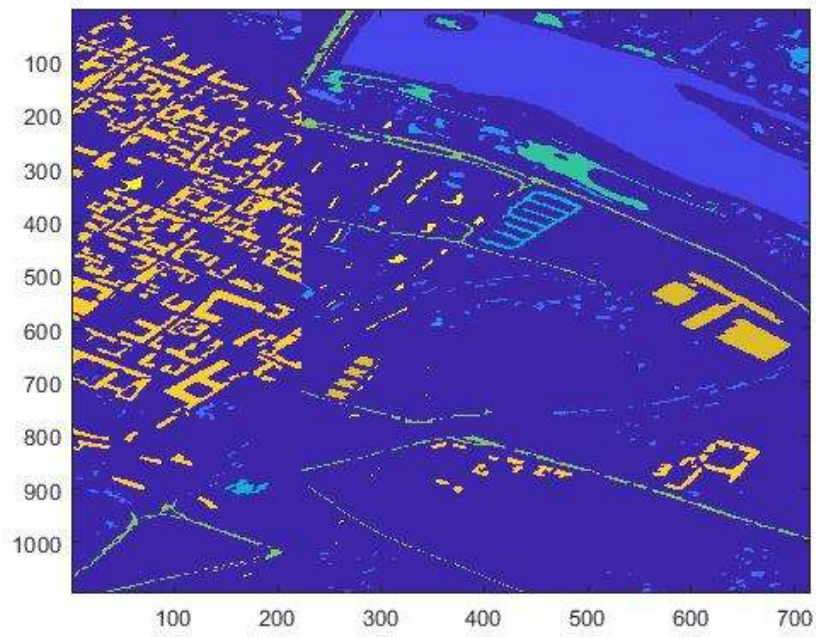
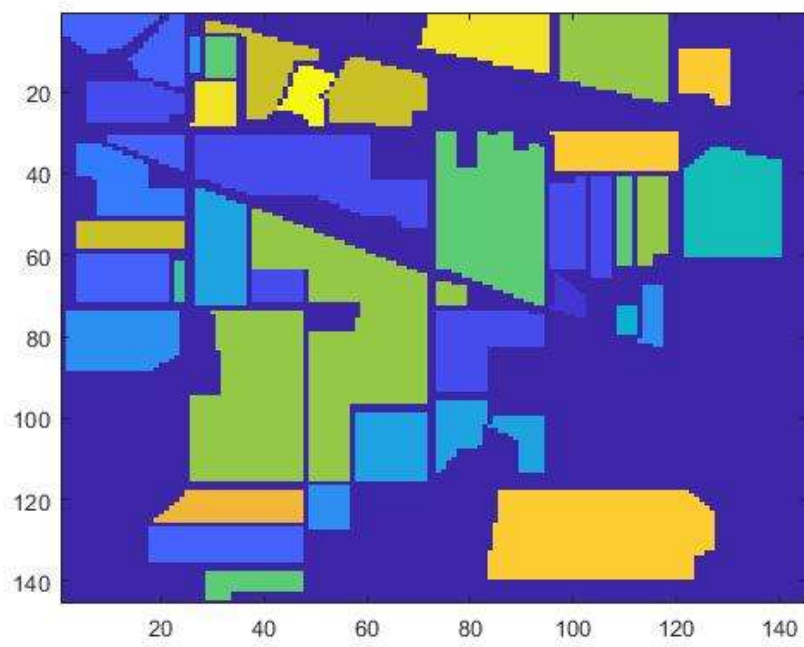## III. FALSE COLOR IMAGE (PAVIA)
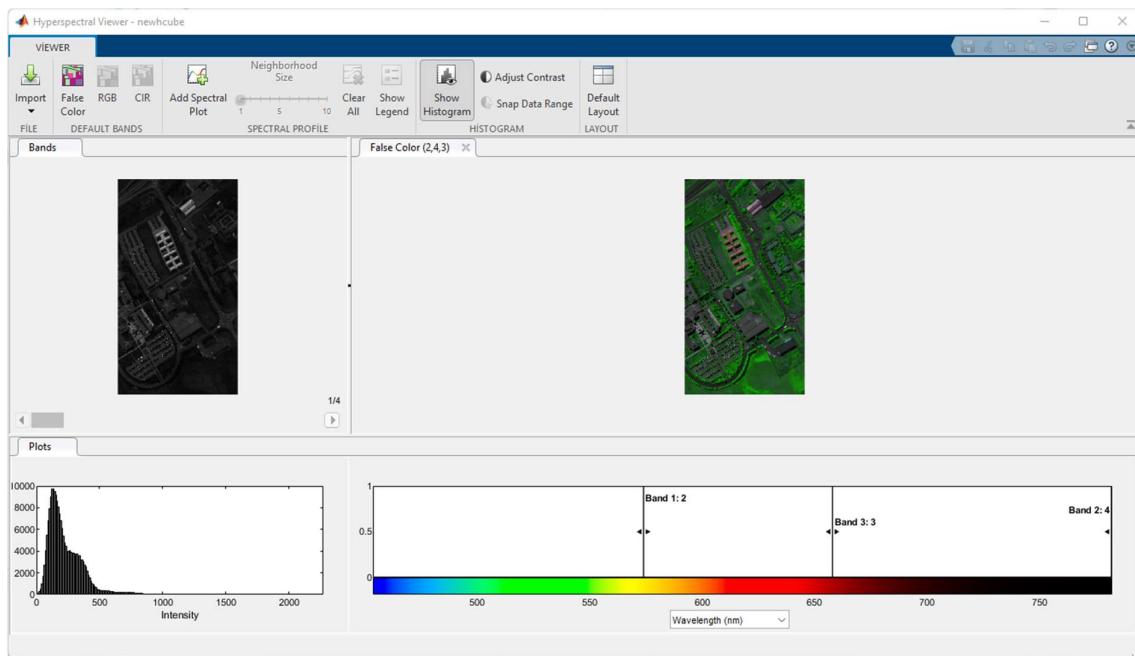
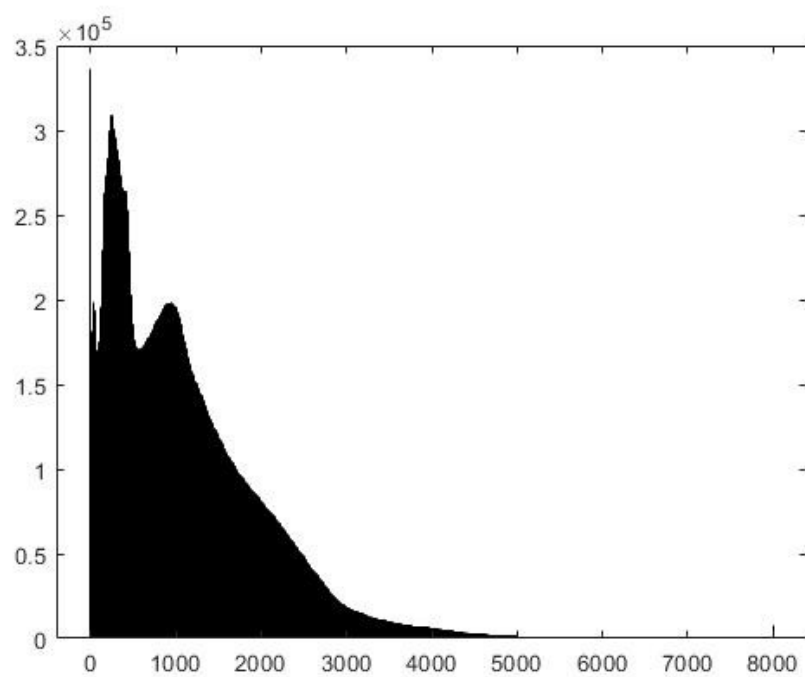## III. FALSE COLOR IMAGE (INDIAN PINES)
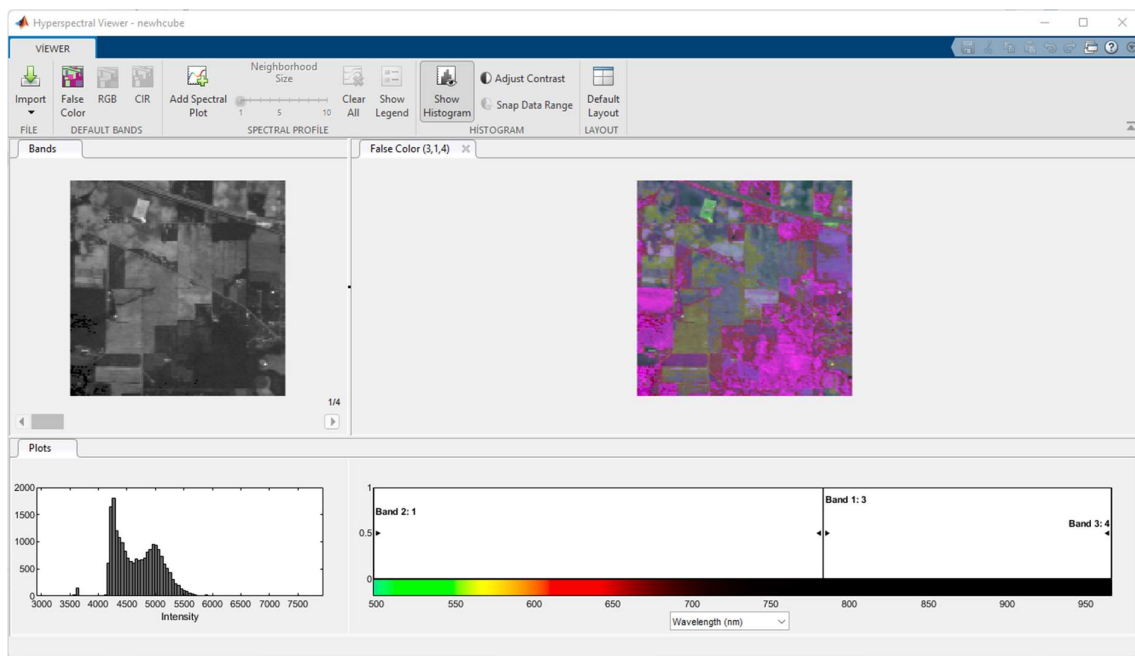
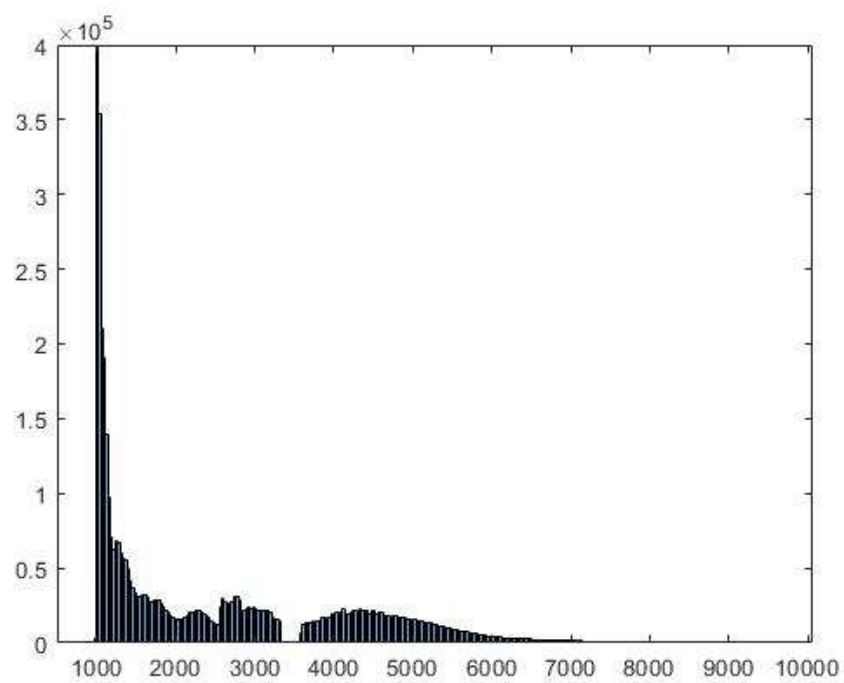IV. PAVIA GT VISUALIZATION
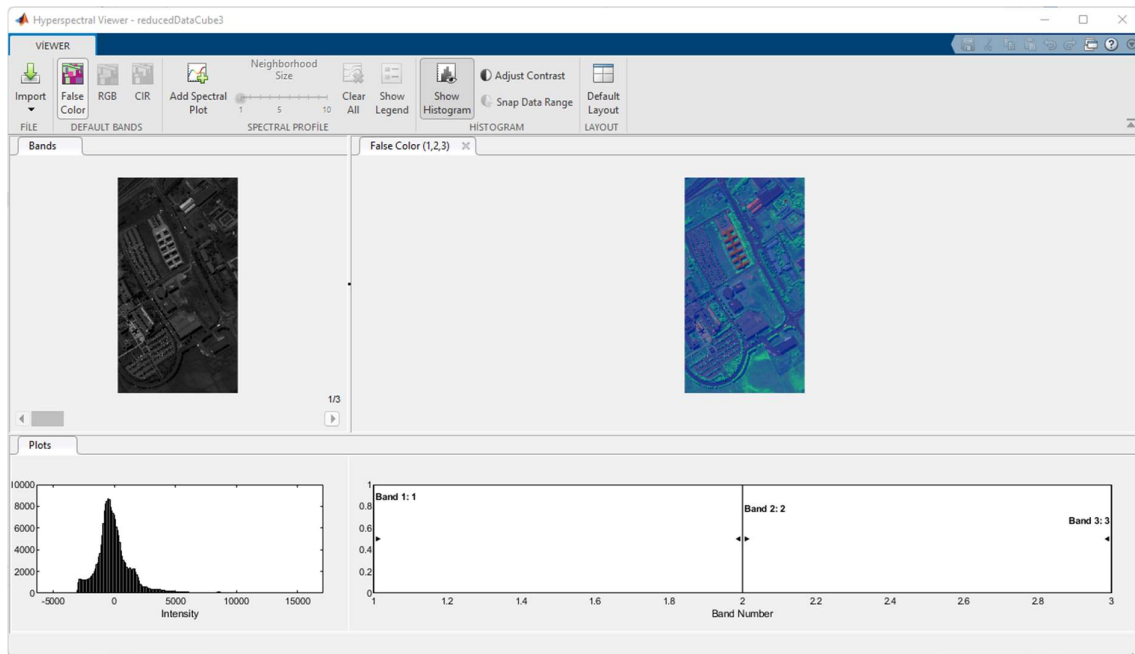

IV. INDIAN PINES GT VISUALIZATION

V. PAVIA HISTOGRAM PLOTS

V. INDIAN PINES HISTOGRAM PLOTS

VII. PAVIA FALSE COLOR IMAGE AFTER PCA(3)

VII. INDIAN PINES FALSE COLOR IMAGE AFTER PCA(3)