**Image Processing for Product Classification  
( Seminar Topic)**

**Submitted By: Muhamed Ashiq  
Department: MCA  
Registration Number: AJC22MCA-2063  
Guide:** Ms. Ankitha Philip

**Abstract**

This seminar explores the integration of image processing techniques for product classification, a critical aspect of modern e-commerce and retail. With the exponential growth of online marketplaces, automating the categorization and tagging of products through visual analysis has become essential for enhancing user experiences and optimizing inventory management.

The seminar delves into the significance, challenges, and emerging trends in leveraging image processing methodologies for product classification.

It covers a spectrum of techniques including traditional methods like edge detection, texture analysis, and colour histograms, alongside modern deep learning architectures such as convolutional neural networks (CNNs). By elucidating practical considerations in data preprocessing, model training, and evaluation, as well as showcasing real-world case studies, the seminar aims to equip attendees with the knowledge and insights needed to harness image processing technologies effectively, thereby streamlining product management processes and improving overall business outcomes in the dynamic landscape of e-commerce and retail.

**References**