





Perumusan Masalah



01

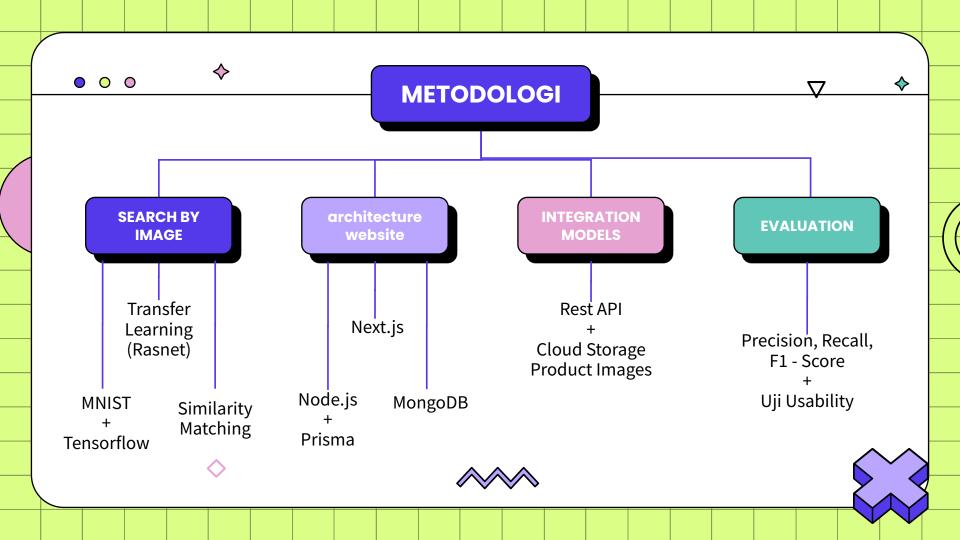
Bagaimana pengaruh variasi arsitektur Convolutional Neural Network (CNN) terhadap akurasi pencarian gambar produk baju batik dalam sistem e-commerce berbasis Next.js dan PostgreSQL?



Apa saja parameter hyperparameter yang paling berpengaruh dalam proses pelatihan model CNN untuk pencarian gambar produk baju batik, dan bagaimana pengaruhnya terhadap performa model?



Bagaimana cara mengimplementasikan Convolutional Neural Network (CNN) untuk meningkatkan akurasi pencarian gambar produk baju batik di toko online berbasis Next.js dan PostgreSQL?















EVALUASI MODEL

- o Precision, Recall, F1 Score untuk mengukur akurasi pencocokan gambar
- o Mean Average Precision untuk pengukuran peringkat pencarian

EVALUASI SISTEM

- o Waktu respons pencarian : menggunakan milidetik
- Usability Testing: Skala Likert untuk menilai kenyamanan pengguna













MIND MAPPING



Model Training

Dataset split for training, validation, and Utilization of frameworks like TensorFlow or PyTorch. Model evaluation based on various performance metrics.



Research Methodology

Data Preprocessing: Resizing images for consistency across the dataset.

Normalizing pixel values for better model training.

Data augmentation to increase dataset diversity.

Technologies Used

Convolutional Neural Network (CNN) for image processing. Next.js for building the web application. PostgreSQL for efficient data storage and management.

Convolutional Neural Network for Image Search

Implementing CNN for product image search in an online batik store.

Research Objectives

Improving accuracy in product image searches.

Enhancing user experience in product discovery.

Developing an efficient, responsive system.

Evaluation Metrics

Accuracy measures overall performance of the model. Precision and recall for specific class identification.

F1-score provides a balance between precision and recall.

Background

E-commerce growth highlights the necessity of effective image search. Challenges exist in text-based search methodologies.

CNN holds potential for advanced image recognition.

Result Analysis

Model comparison to evaluate effectiveness.

Error analysis to refine model accuracy. User feedback incorporated to improve search functionalities.





