IMPLEMENTASI ALGORITMA GENETIKA UNTUK DESAIN KEMASAN PRODUK IKAN FROZEN BERDASARKAN *KANSEI ENGINEERING*

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Abstrak

Kemasan adalah salah satu *brand image* yang dapat mempengaruhi perilaku pelanggan. Dalam penelitian ini, peneliti berusaha mengidentifikasi berbagai kemasan produk ikan frozen yang ada di supermarket-supermarket Jakarta. Dari 19 kemasan yang telah dikumpulkan, akan diberikan penilaian pada masing-masing elemen kemasan berdasarkan keinginan afektif pelanggan dengan menerapkan prinsip *kansei engineering.* Berdasarkan *prinsip kansei engineering* yang diselesaikan dengan metode *Principal Component Analysisi* (PCA) kemudian akan diberikan solusi berupa usulan redesign kemasan produk ikan frozen melalui implementasi Algoritma Genetika.

Hasil penelitian yang diperoleh dari hasil ekstraksi kata kansei dengan menggunakan metode *Principal Component Analysis* (PCA) terdapat 7 kansei yang sesuai dengan keinginan afektif pelanggan. Adapun ke-7 kansei tersebut adalah "Bagus, Informatif, Layak, Original, Bersih, Menarik, Jelas". Berdasarkan 7 *kansei words* diberikan usulan *redesign* elemen kemasan dari hasil *crossover* dan mutasi pada implementasi Algoritma Genetika dengan probabilitas *crossover* dan mutasi yang sama, yaitu 5.394191 dan 9.543568 masing-masing menghasilkan 2 *offspring* yang berbeda yang dijadikan sebagai usulan *redesign* kemasan.

Kata Kunci : *Kansei Engineering, Principal Component Analysis, Algoritma Genetika*

IMPLEMENTATATION OF GENETIC ALGORITHM FOR DESIGN PACKAGING OF FROZEN FISH PRODUCTS BASED ON KANSEI ENGINEERING

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Abstract

Packaging is one of brand image that can affect customer behavior. In this researcher, researchers tried to identify various packaging of frozen fish products that exist in Jakarta supermarkets. The 19 packaging that have been collected will be given an assessment of each packaging element based on the customer's affective desires by applying the kansei engineering principle. Based on kansei engineering principke that have solved with the Principal Component Ananlysis (PCA) method will then be given a solution in the form of proposed for redesign of the packaging of frozen fish products through the implementation of Genetic Algorithms (GA).

The research results obtained from the extraction of the kansei word using the Pricipal Component Analysis method have to 7 kansei words that are in accordance with the customer's affective desires, namely "Good", "Informative" "Original","Worthy", "Clean:, "Interesting", "Clear". Based on 7 kansei words given the proposed redesign of packaging elements from the results of crossover and mutation through the implementation of genentic algorithms with the same probability of crossover and mutation 5.394191 and 9.543568 eachproduced 2 different offspring as proposed packaging redesign

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