

# Research Statement

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As a researcher in the field of artificial intelligence and its applications to science and engineering, I am committed to tackling complex and challenging problems that have the potential to make a significant impact on society. My research aims to advance the state of the art in AI and to develop novel methods and technologies that can be applied to a wide range of scientific and engineering domains.

One of my key areas of research is histological image classification, where I have made important contributions to the development of ensemble optimization. My work in this area has resulted in several high-impact publications, including Ensemble Optimization for Invasive Ductal Carcinoma (IDC) Classification Using Differential Cartesian Genetic Programming, in IEEE Access which is a Q1 journal, Ensemble Optimization Using Clonal Selection Algorithm for Breast Cancer Histology Image Classification, Adaptive PSO-Based Ensemble Optimization for Histology Image Classification, and Genetically Optimized Heterogeneous Ensemble for Histological Image Classification. I have also collaborated with researchers from the University of Toledo to advance the understanding of AI-based efficient resources allocation for 5G-Networks and to develop new methods and technologies.

In addition to histological image classification, I am also interested in exploring the intersection of artificial intelligence and various Engineering fields. I believe that this intersection has the potential to unlock new insights and capabilities in both fields, and I am eager to contribute to the development of these emerging research areas. My current work in this area includes the development of Artificial Intelligence models for 5G-networks, which has the potential to improving resources allocation for d2d clients.

At KAUST, I see the potential to further advance my research in artificial intelligence and its applications to science and engineering, and I am excited about the opportunity to join the faculty and contribute to the research community at the university. I believe that the resources and expertise

available at KAUST, combined with the diverse and collaborative research environment, would provide an ideal platform for my continued growth as a researcher. I am confident that my research would align well with the research priorities of KAUST and would make a valuable contribution to the university's mission of advancing scientific knowledge and solving global challenges.