

# The Improvement of customer service using machine learning: sustaining competitive advantage in commercial bank = Pengembangan customer service menggunakan machine learning: Memajukan competitive advantage di perbankan komersial

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## Abstrak

Akhirnya kita tiba di era kecerdasan buatan di mana teknologi telah dilatih untuk meniru kecerdasan manusia. Machine Learning adalah salah satu terobosan dalam kecerdasan buatan yang menyajikan banyak potensi untuk menghadirkan keunggulan kompetitif dengan kemampuannya untuk mengoptimalkan analisis data secara otomatis. Industri perbankan komersial selalu menjadi pengadopsi awal berbagai kecerdasan buatan. Namun, potensi Machine Learning di perbankan komersial masih belum tergali. Lama setelah krisis keuangan yang hebat, industri perbankan komersial telah menjadi lebih besar dan lebih kompetitif, dengan banyak pengganggu yang mengubah lingkungan persaingan di industri tersebut. Industri perbankan kini memasuki era transformasi digital berikutnya, di mana persaingan semakin ditentukan oleh teknologi. Di bank komersial, layanan pelanggan adalah area krusial di mana semua titik kontak langsung dengan pelanggan terjadi. Bank harus terus mencari cara baru dalam meningkatkan kemampuannya dalam memberikan layanan berkualitas tinggi yang memenuhi bahkan melebihi harapan nasabah. Untuk mencapai hal tersebut diperlukan pengetahuan yang intensif tentang pelanggan. Makalah ini bertujuan untuk membahas potensi machine learning dalam meningkatkan berbagai aktivitas customer service di bank umum. Secara khusus, Machine Learning meningkatkan pengembangan layanan yang dipersonalisasi, pencegahan penipuan, dan bantuan pelanggan virtual yang sangat penting untuk kelangsungan hidup bank komersial saat ini.

..... We have finally arrived in the age of artificial intelligence where technologies have been trained to imitate human intelligence. Machine learning is one of the breakthroughs in artificial intelligence that serve a lot of potential to bring competitive advantage with its ability to automatically optimize data analyses. Commercial banking industry has always been the early adopter of various artificial intelligence. Yet, the potentials of machine learning in commercial banking are still unexplored. As banking industry is now entering the next era of digital transformation, the competition is increasingly defined by technology. Technological transformation has changed the competitive environment in banking industry, and influenced consumer behaviour. Machine learning offers new ways in which banks could overcome these challenges. In commercial banking, customer service is the crucial area where all direct touch-points with customers take place. Banks must continuously find new ways in improving its ability to deliver high quality service that meets and even exceeds customer expectation. The objective of this paper is to discuss the potential of machine learning in improving various customer service activities in a commercial bank. This paper is particularly relevance for managers in banking industry as it provides comprehensive discussion about the business implications of machine learning. The research question that I aim to answer in this paper is about: How Does Machine Learning Help Commercial Banks to Sustain Competitive Advantage in Customer Service?