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## Deep generative models for engineering design

Fan, J.

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# Acknowledgment

At the outset, this work began as a blank slate. Long before GenAI became part of mainstream discourse, we embarked on experimenting with machine learning methods to generate recognizable engineering designs. What began as a bold idea soon revealed itself to be a transformative endeavor—one of profound significance, yet accompanied by uncertainty and formidable challenges. This journey, demanding both perseverance and belief, became possible only through the unwavering support, guidance, and encouragement of many exceptional individuals.

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# Curriculum Vitae

Jiajie Fan was born in 1996 in Wenzhou, China. After completing his undergraduate studies in Automotive Engineering at Wuhan University of Technology, he pursued a Master's degree in Mechanical Engineering at Technische Universität Darmstadt, which he obtained in 2022. Following his master's studies, he began his doctoral studies in Computer Science at Leiden University's Leiden Institute of Advanced Computer Science (LIACS), in cooperation with BMW. There, he conducts research on generative design and machine learning methods under the supervision of Prof. Thomas Bäck, Dr. Babak Gholami, Dr. Hao Wang, and Laure Vuaille. During his PhD studies he took several courses, including the Scientific Conduct.

Recently, Jiajie joined the newly established startup Kyrall as a founding engineer, where he works on bringing AI for CAD from zero to one, enabling generative artificial intelligence for engineering CAD generation. In this role, he contributes to the development of core technologies that bridge cutting-edge research in generative models with practical, industry-ready engineering design workflows. His goal is to advance the integration of generative AI into real-world engineering processes, making design more efficient, creative, and accessible.