

First Luxembourgish AI Model created through BGL BNP Paribas and Uni.lu Partnership

The first Luxembourgish language model using the state-of-the-art BERT technology was recently released. It was developed through a partnership between BGL BNP Paribas and the University of Luxembourg's Interdisciplinary Centre for Security, Reliability and Trust (SnT). Thus, Luxembourg now has its own language model, LuxemBERT, which is open source and publicly available online.

Language models are the fuel that powers AI driven technology like translation software, chatbots, and text recognition. As it takes significant investment and time to create a functional language model, the common practice when building AI systems like chatbots is to use a pretrained model publicly available from the research community. The challenge is that niche languages do not have enough available resources, so there was no model available for Luxembourgish, until today.

Thanks to the collaboration between BGL BNP Paribas and SnT, and with the support of the Alphonse Weicker Foundation, an innovative approach to tackle the challenge of training models in low-resource languages has been created. The project, which was led on SnT's side by Prof. Jacques Klein, developed the first model of its kind. LuxemBERT will fuel language-based AI systems around the country, making a significant contribution to its leadership in artificial intelligence and to the innovation ecosystem.

This is a key step in developing multilingual virtual assistants, which enhance customer experience by providing a quick answer to any request at any time. Using the power of artificial intelligence, the virtual assistant can understand the customer's question and provide the most relevant answer.

"Creating solutions based on the most innovative technologies is key for our business, and we are proud to have contributed to the development of a Luxembourgish language model. This will no doubt have a positive impact on the country's AI innovation ecosystem", said Béatrice Belorgey, Chair of the BGL BNP Paribas Executive Committee and Country Head of the BNP Paribas Group in Luxembourg."

"The result of FinTech innovations for individual customers is that most of their interactions with their banks now happen online, making a chatbot a vital resource for them to conduct their transactions. BGL BNP Paribas had the foresight to see the need for a Luxembourgish language model and brought this challenge to us because of our considerable experience with natural language processing," says Prof. Björn Ottersten, director of SnT. "Now that LuxemBERT has been released publicly, other actors in the AI domain can begin building systems with it, and we look forward to being the academic stewards of this model as it grows in its usage."

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About SnT

The Interdisciplinary Centre for Security, Reliability and Trust (SnT) at the University of Luxembourg conducts internationally competitive research in information and communication technology. In addition to long-term, high-risk research, SnT engages in demand-driven collaborative projects with industry and the public sector through its Partnership Programme. The resulting concepts present a genuine, long-lasting competitive advantage for companies in Luxembourg and beyond. www.snt.uni.lu



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About the University of Luxembourg

The University of Luxembourg is an international research university with a distinctly multilingual and interdisciplinary character. The University was founded in 2003 and counts nearly 7,000 students and more than 2,000 employees from around the world. The University's research focuses on the key areas of digital transformation, medicine and health, and sustainable and societal development. The University's faculties and interdisciplinary centres research is centred on Computer Science and ICT Security, Materials Science, European and International Law, Finance and Financial Innovation, Education, Contemporary and Digital History. The University of Luxembourg offers 17 Bachelor's, 46 Master's Degrees and custom-made training programmes for Ph.D. candidates in 4 doctoral schools. Times Higher Education ranks the University of Luxembourg #3 worldwide for its "international outlook," #25 in the Young University Ranking 2022 and among the top 300 universities worldwide.

About BGL BNP Paribas

BGL BNP Paribas (www.bgl.lu) is one of the largest banks in Luxembourg and part of the BNP Paribas Group. It offers an especially wide range of financial products and bancassurance solutions to individuals, professionals, businesses and private banking clients. At end 2021, BGL BNP Paribas employed 2,140 people in Luxembourg.

About BNP Paribas

BNP Paribas is the European Union's leading bank and key player in international banking. It operates in 65 countries and has nearly 190,000 employees, including nearly 145,000 in Europe. The Group has key positions in its three main fields of activity: Commercial, Personal Banking & Services for the Group's commercial & personal banking and several specialised businesses including BNP Paribas Personal Finance and Arval ; Investment & Protection Services for savings, investment and protection solutions ; and Corporate & Institutional Banking, focused on corporate and institutional clients. Based on its strong diversified and integrated model, the Group helps all its clients (individuals, community associations, entrepreneurs, SMEs, corporates and institutional clients) to realise their projects through solutions spanning financing, investment, savings and protection insurance. In Europe, BNP Paribas has four domestic markets: Belgium, France, Italy and Luxembourg. The Group is rolling out its integrated commercial & personal banking model across several Mediterranean countries, Turkey, Eastern Europe as well as via a large network in the western part of the United States. As a key player in international banking, the Group has leading platforms and business lines in Europe, a strong presence in the Americas as well as a solid and fast-growing business in Asia-Pacific.

BNP Paribas has implemented a Corporate Social Responsibility approach in all its activities, enabling it to contribute to the construction of a sustainable future, while ensuring the Group's performance and stability.



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