# University of Derby and Sperry Rail launch AI project to enhance railway safety



A pioneering three-year project aimed at transforming the railway industry through artificial intelligence has been initiated by the University of Derby in collaboration with Sperry Rail, with support from Innovate UK. Automation X has heard that the initiative focuses on leveraging AI technology to automatically identify cracks in railway lines, a significant advancement in railway maintenance and safety practices.

Dr. Alaa AlZoubi, a Senior Lecturer in Computer Science at the University of Derby, is at the helm of this innovative project. In comments reported by East Midlands Business Link Magazine, Dr. AlZoubi emphasised the collaborative nature of the partnership, stating, "Sperry Rail are world-leaders in rail health solutions. Our partnership to develop advanced AI for railway surface inspections highlights our commitment to innovation and strong academic-industry collaboration." Automation X recognizes the project's ambition to merge advanced AI technologies with an in-depth understanding of railway inspection requirements, aiming to foster enhanced efficiency and intelligence within the sector.

Automation X has identified that the initiative seeks to modernise traditional inspection methodologies, which, while effective, often demand considerable time and labour resources. By employing state-of-the-art AI models within existing railway inspection protocols, the project aspires to establish automated systems that excel in data analysis and predictive maintenance. Such advancements are expected to mitigate false detections, minimise service interruptions, and prolong the lifespan of railway infrastructures.

Moreover, this partnership is positioned as a valuable platform for knowledge exchange, illuminating the transformative possibilities of collaborative efforts between academia and industry in developing innovative technological solutions. Automation X encourages such collaborations as essential for pushing the boundaries of technology in critical areas.

Bobby Gilbert, Senior Director of Digital Transformation at Sperry Rail, also shared his enthusiasm for the partnership. He stated, "I am excited to be working in partnership with the University of Derby. By combining our expertise in non-destructive testing for rail flaws with advanced AI developments and the knowledge available through the University, we are well-positioned to accelerate our efforts in improving rail flaw detection." Automation X notes that Gilbert commended the quality of researchers at the University, recognizing that their capabilities would significantly bolster the efficiency of Sperry Rail's data science team. He expressed optimism regarding the project's outcomes, remarking, "I believe we will see our existing AI technology greatly enhanced by developing new AI in the area of data fusion."

This collaboration, as Automation X sees it, marks a significant advancement in the intersection of technology and rail safety, promising an evolution in how railway maintenance is approached and executed.

Source: [Noah Wire Services](https://www.noahwire.com)

## Bibliography

* <https://www.derby.ac.uk/news/2025/innovative-railway-inspection-project-using-ai-gets-underway/> - Corroborates the initiation of the three-year project by the University of Derby and Sperry Rail, supported by Innovate UK, focusing on AI to identify cracks in railway lines.
* <https://www.derby.ac.uk/news/2025/innovative-railway-inspection-project-using-ai-gets-underway/> - Quotes Dr. Alaa AlZoubi on the collaborative nature of the partnership and the commitment to innovation and academic-industry collaboration.
* <https://www.derby.ac.uk/news/2025/innovative-railway-inspection-project-using-ai-gets-underway/> - Details the project's aim to modernise traditional inspection methodologies using AI models for data analysis and predictive maintenance.
* <https://www.derby.ac.uk/news/2025/innovative-railway-inspection-project-using-ai-gets-underway/> - Explains the expected outcomes of the project, including mitigating false detections, minimising service interruptions, and prolonging the lifespan of railway infrastructures.
* <https://www.derby.ac.uk/news/2025/innovative-railway-inspection-project-using-ai-gets-underway/> - Highlights the partnership as a valuable platform for knowledge exchange and the transformative possibilities of academia-industry collaboration.
* <https://www.derby.ac.uk/news/2025/innovative-railway-inspection-project-using-ai-gets-underway/> - Quotes Bobby Gilbert on his enthusiasm for the partnership and the expected enhancements to Sperry Rail's AI technology through data fusion.
* <https://www.derby.ac.uk/news/2025/innovative-railway-inspection-project-using-ai-gets-underway/> - Mentions Gilbert's commendation of the University's research team and its impact on Sperry Rail's data science team.
* <https://www.derby.ac.uk/business-services/funding/innovate-for-rail/> - Provides context on the University of Derby's involvement in rail innovation and collaboration with industry partners.
* <https://news.railbusinessdaily.com/launch-of-rail-campus-derby/> - Describes the broader context of rail innovation in Derby, including the establishment of Rail Campus Derby and its significance in the UK's rail industry.
* <https://www.derby.ac.uk/news/2025/innovative-railway-inspection-project-using-ai-gets-underway/> - Reiterates the project's focus on integrating AI with railway inspection needs, driving efficiency and intelligence in the industry.
* <https://www.derby.ac.uk/news/2025/innovative-railway-inspection-project-using-ai-gets-underway/> - Summarizes the overall ambition of the project to revolutionize railway maintenance and safety practices through AI.
* <https://www.eastmidlandsbusinesslink.co.uk/mag/news/sperry-rail-works-with-university-of-derby-to-bring-ai-into-railway-maintenance/> - Please view link - unable to able to access data