


# Kiran De Roy

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## Education

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<b>KU Leuven: Group T</b> MSc in Electronics-ICT: Software Systems • Coursework: C++, Machine Learning, Cybersecurity, Distributed Systems	Sept 2024, June 2025
<b>KU Leuven: Group T</b> BSc in Electronics-ICT: Smart Electronics and Software • Coursework: Operating Systems, Object-Oriented Programming, Web Development	Sept 2020, Feb 2025
<b>KAMSA Aarschot</b> Science and Mathematics	Sept 2014, June 2020

## Research

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**Master's Thesis – Real-Time Pelvic Rotation Detection Using Machine Learning**      Sept 2024, June 2025  
Developed machine learning models for real-time pelvic rotation detection to address lower back pain, achieving 95% weighted F1-score using MS-TCN++ temporal model on IMU sensor data.  
**Technologies:** Python, Scikit-learn, Pandas, NumPy, Tensorflow, PyTorch,

## Projects

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<b>Automatic Chessboard with Lichess Integration</b> • Built an automatic chessboard powered by ESP32-S3 using CoreXY mechanism and electromagnets • Integrated with Lichess API via React web app • Tools: ESP-IDF (C), React, Stepper Motor Drivers, CoreXY Kinematics • Awarded <b>Best Student Project 2024</b>	 Source Code
<b>Student Freelancing SaaS Application: UniGigs</b> • SaaS web app for students to offer and find freelance gigs • Authentication, file storage via Firebase, payments via Stripe • Tools: React, TypeScript, Firebase • Awarded <b>Most Technically Advanced SaaS Application 2025</b>	 Source Code
<b>Distributed Food Ordering System</b> • Microservices-based food ordering platform with 2PC transactions • Designed REST APIs, monitoring services, deployed to Azure • Tools: Java, Spring Boot, REST APIs, Maven, Azure, GitHub Actions	 Source Code

Check out my **website** for videos, screenshots and a comprehensive list of other completed projects.

## Skills

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**Languages:** Java, C++, C, PHP, SQL, Python  
**Technologies:** Symfony, Git, React, Firebase, QTCreator, Tensorflow, Ubuntu  
**Dutch (native), English (fluent)**

## Other Experience

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<b>Student Job, Delhaize</b> • Operated the cash register • Restocked shelves	July 2019, July 2021
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