


# Kiran De Roy

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## Education

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### KU Leuven: Group T

MSc in Electronics-ICT: Software Systems

Sept 2024, June 2025

- Coursework: C++, Machine Learning, Cybersecurity, Distributed Systems

### KU Leuven: Group T

BSc in Electronics-ICT: Smart Electronics and Software

Sept 2020, Feb 2025

- Coursework: Operating Systems, Object-Oriented Programming, Web Development

### KAMSA Aarschot

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, CUDA

## Projects


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### Automatic Chessboard with Lichess Integration

 Source Code


- 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 **Best Student Project 2024**

### Student Freelancing SaaS Application: UniGigs

 Source Code

- SaaS web app for students to offer and find freelance gigs
- Authentication, file storage via Firebase, payments via Stripe
- Tools: React, TypeScript, Firebase
- Awarded **Most Technically Advanced SaaS Application 2025**

### Distributed Food Ordering System

 Source Code

- 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

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, JavaScript, Python

**Technologies:** Symfony, Git, React, Firebase, QTCreator, Tensorflow, Ubuntu

**Dutch (native), English (fluent)**

## Other Experience

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### Student Job, Delhaize

July 2019, July 2021

- Operated the cash register
- Restocked shelves