



## PERSONAL DATA

Dieuwertje Maria Elisabeth de Beer

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## LANGUAGES

Dutch (native)  
English (fluent)

## PROGRAMMING LANGUAGES

Python (NumPy, Pandas, Scikit-learn, Seaborn, Pygame, Matplotlib)  
Micropython  
HTML  
CSS  
JavaScript  
Java  
R (Tidyverse, Shiny)  
Arduino/C++  
Mathematica

# DIEUWERTJE DE BEER

She/Her

## EDUCATION

### UNIVERSITY COLLEGE ROOSEVELT

2022 -2025

*Bachelor of Science (honors, GPA=3.3), with a minor in Electrical Engineering*

#### Relevant subjects

##### Data Science:

- Introduction to Data Science
- Machine Learning
- Robotics

##### Computer Science:

- Introduction to Programming
- Artificial Intelligence
- Topics in Computer Science (Algorithms)

##### Physics:

- Introduction to Physics
- Quantum Mechanics
- Advanced Physics
- Electromagnetism
- Particle Physics

### ERASMUS COLLEGE ZOETERMEER

2016-2022

*VWO certificate in Physics & Engineering / Biology & health*

## CERTIFICATES

**IELTS**, International English Language Test System (achieved in 2022)

## RELEVANT ACADEMIC EXPERIENCES

### SENIOR PROJECT - ROBOTICS

*“Design and Implementation of an Autonomous Robot; Incorporating ESP-NOW Communication and Ultra-Wideband Radiolocation”*

## SKILLS

LaTeX  
Canva

## OTHER WORK EXPERIENCES

Student Ambassador at UCR  
(2024-2025)

Allround Employee at Hotel de Nieuwe Doelen (2023)

Waitress at Brasserie 1640  
(2022)

Manager Digital Archive at Peutz (2020-2021)

Trainster at Mixed Hockey Club Zoetermeer (2018-2020)

During my senior project, I designed and built an autonomous robot capable of determining its position within a building using Ultra-Wideband (UWB) radiolocation. In addition, I implemented ESP-NOW communication, enabling the robot to efficiently exchange data wirelessly with other microcontrollers or robots.

## INTERNSHIP - DATA SCIENCE

In the final year of my bachelor's degree, I completed an internship in which I developed a web application using R Shiny. This app automatically checks whether students meet all the requirements to graduate from University College Roosevelt (UCR).

## FINAL PROJECT - MACHINE LEARNING

For the Machine Learning course, I completed a final project in which I applied various machine learning models in Python to the CERN Subatomic Particles Dataset. The goal was to classify which particle was detected in a detector, with a focus on distinguishing between the Upsilon and J/psi particles, which have very similar masses.

## FINAL PROJECT - ARTIFICIAL INTELLIGENCE

For the Artificial Intelligence course, I recreated the game Flappy Bird in Python using Pygame. I then developed three different AI agents that were able to play the game using simple heuristics.

## DATAFEST - FIRST PLACE

As part of a team of six, I participated in Zeeland Datafest, a 14-hour hackathon focused on solving societal challenges through data analysis. With transportation as the main theme, we analyzed several provided datasets and developed a solution that earned us first place.