



# Oween Barranzuela Carrasco

26/03/1999 | +49 1573 5344 248 | oweenbarranzuela@gmail.com

Portfolio: <https://oween-cesar.netlify.app/>

oweenbarranzuela/ | OweenCesar

Bahnhofstraße 21, 94469 Deggendorf, Germany

## PROFILE

AI B.Sc. student (5th semester, GPA 2.3) with hands-on experience in Python, scikit-learn and time-series modeling from a research assistant role at THD. Developed full-stack ML and AI applications, including a voice-first help platform (HackaTUM 2025), an image classification pipeline, and a full-stack Titanic survival prediction app. Looking for an internship (min. 18 weeks) or working student position in Data Science, Machine Learning or Software Engineering from 02/2026 (20 h/week), in Germany (remote or on-site).

## EDUCATION

### • Deggendorf Institute of Technology

10/2023 - Present

Deggendorf, Germany

*Artificial Intelligence, B. Sc.*

- GPA: 2.3 (5th Semester); focus on Machine Learning, Software Engineering, Python Programming, and NLP

### • Vilnius University of Applied Sciences

09/2025 – 11/2025

Vilnius, Lithuania

*Erasmus+ Blended Intensive Programme — Student Management System*

- Selected for an Erasmus+ programme to design and prototype a student management system, focusing on database architecture, authentication modules, and academic information workflows using Oracle APEX.

### • Selçuk University

2019–2023

Konya, Turkey

*International Business and Relations, B. A.*

- GPA: 3.64/4.00

- Focus: Business Development, Diplomacy, Research, International Trade

## RELEVANT EXPERIENCE

### • Deggendorf Institute of Technology

10/2025 – Present

Deggendorf, Germany

*Student Research Assistant*

- Preprocessed and cleaned 1+ year of multi-sensor water-quality data (pH, DO, conductivity, temperature) in Python (pandas, NumPy, scikit-learn), using Z-score-based outlier detection and time-series interpolation to handle missing values.
- Built and evaluated regression and tree-based models (Random Forest, XGBoost) in scikit-learn to predict nitrate and other water-quality indicators, using train/test splits, cross-validation, and error metrics (MSE, MAE, R<sup>2</sup>).
- Manually analyzed sensor agreement using comparison diagrams/plots across vendors (Atlas Scientific vs DFRobot vs reference), then applied K-Means clustering (k=3) on standardized features to segment operating conditions

### • Statista GmbH

09/2023 – 11/2023

Hamburg, Germany

*Research Assistant*

- Processed, structured, and quality-checked datasets for market and industry statistics using Excel and internal tools, ensuring accuracy and consistency.
- Supported content editors in curating and publishing statistical data and visualizations for the Statista.com platform and wrote concise English summaries for a global audience.

## OTHER EXPERIENCE

### • Deggendorf Institute of Technology

03/2025 – 07/2025

Deggendorf, Germany

*Orientation and Integration Tutor for International Students*

- Guided and supported international AI students with academic and administrative matters in English and German, improving communication and coordination skills.
- Helped organize onboarding events such as Orientation Weeks and “Taste the World”, fostering integration and intercultural exchange.

### • Özgaydın Automotiv

08/2019 – 07/2022

Konya, Turkey

*Market Researcher*

- Identified over 100 potential cylinder head importers in South America using corporate databases, trade fair research, and outbound email/phone campaigns.
- Contributed to an 80% increase in regional sales (2019–2022) through systematic lead generation, follow-up, and preparation of Excel-based customer lists and reports.

## ACADEMIC PROJECTS

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- **ZeitZuHelfen — Voice-First Help Platform for Seniors** 2025  
*Tools: FastAPI, Telegram Bot API, Google Gemini 2.0 Flash, SQLite, SQLAlchemy, Pydantic*
  - Developed during HackaTUM 2025: a voice-first help request platform connecting seniors in Munich with student helpers, reducing technology barriers for older adults.
  - Implemented a FastAPI backend with user management, authentication, and request CRUD operations, backed by a shared SQLite database using SQLAlchemy and async queries.
  - Built a Telegram bot interface that processes voice messages, using Google Gemini 2.0 Flash to transcribe speech and extract structured help-request data.
  - Integrated Google Address Validation API and gTTS to validate German addresses and provide natural German voice responses to users.
- **Sperm Image Classification with Machine Learning** 2025  
*Tools: Python, Pandas, NumPy, scikit-learn*
  - Machine learning course project; built an image classification pipeline to distinguish sperm vs. non-sperm cells using over 3,000 labeled RGB microscope images.
  - Engineered statistical and histogram-based features from images and applied preprocessing (scaling, feature selection) for model training.
  - Trained and tuned KNN, Random Forest, and SVM models with GridSearchCV, evaluating performance using accuracy, confusion matrices, and model comparison.
- **IcebergAI — Full-Stack ML Web Application** 2025  
*Tools: Python, scikit-learn, React+Vite, Docker, GitLab*
  - Group software engineering project; built an end-to-end ML system to predict Titanic passenger survival based on demographic and ticket features.
  - Implemented and evaluated classification models in Python (scikit-learn) and exposed the prediction logic via a backend API.
  - Designed a modern, responsive React+Vite frontend to collect user input and display prediction results in an intuitive way.
  - Containerized the application with Docker and coordinated a 7-member team using GitLab issues and merge requests to ensure on-time delivery.

## TECHNICAL SKILLS

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- **Programming & Data:** Python, SQL, pandas, NumPy
- **ML & AI:** scikit-learn, PyTorch, LangChain, time-series modeling, model evaluation (MSE, MAE, R<sup>2</sup>)
- **Web & APIs:** FastAPI, Flask, Streamlit, React, Telegram Bot API, Oracle APEX
- **Databases & BI:** MySQL, PostgreSQL, SQLite, Power BI
- **Tools & DevOps:** Git, GitHub/GitLab, Docker, Linux, Jupyter, Google Colab, LaTeX, Grafana

## AWARDS

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- **HackaTUM 2025 – City of Munich Challenge** 11/2025  
*TUM Munich*
  - Placed in the Top 10 teams with the *ZeitZuHelfen* project.
- **STIBET Scholarship** 2025  
*DAAD / THD*
  - Awarded for outstanding commitment at Deggendorf Institute of Technology.
- **Erasmus+ Scholarship** 2025  
*Erasmus+*
  - Funded participation in an Erasmus+ Blended Intensive Programme in Vilnius.

## TRAINING AND CERTIFICATIONS

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- LangChain – Develop AI Agents with LangChain and LangGraph (Udemy)
- Supervised Machine Learning: Regression and Classification (Coursera)

## LANGUAGES

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Spanish (Native), English (C1), German (B2), Turkish (C1), Portuguese (A1)