

# Zacharias Aram

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## EDUCATION

### Ruhr-Universität Bochum

*Master of Science*

Bochum, Germany

April 2022 – est. August 2024

- **Major, current GPA:** Mechanical Engineering, 3.8
- **Master's Thesis:** Artificial Intelligence and Computer Vision for Automated Recognition of Assembly Steps in the Context of Assistance Systems

### Universiti Putra Malaysia

*Semester Abroad*

Selangor, Malaysia

March 2023 – July 2023

### Ruhr-Universität Bochum

*Bachelor of Science*

Bochum, Germany

September 2017 – March 2022

- **Major, GPA:** Mechanical Engineering, 2.2
- **Bachelor's Thesis:** Development of a Mobile Collaborative Robot System for Foaming Processes in the Automotive Industry

### Istanbul Teknik Üniversitesi

*Semester Abroad*

Istanbul, Turkey

October 2020 – March 2021

### Städtisches Gymnasium Ahlen

*A-level*

Ahlen, Germany

August 2011 – July 2017

## PROFESSIONAL EXPERIENCE

### Ruhr-Universität Bochum | Lehrstuhl für Produktionssysteme

*Student Assistant*

Bochum, Germany

July 2022 – April 2023

- Supported and advised on the digital transformation of international companies
- Created self-learning modules on Industry 4.0, maturity models, value creation processes, and digital business models
- Presented the self-learning modules in an international project consortium
- Conducted workshops

### Cademy GmbH

*Bachelor's Internship: Project Management*

Ennepetal, Germany

August 2021 – March 2022

- Independently developed a mobile collaborative robot system for the automotive industry

### Cademy GmbH

*Technical Intern*

Ennepetal, Germany

March 2021 – July 2021

- Trained in the following areas: Controllino PLC (industrialized Arduino), AGVs, collaborative robots, design, and additive manufacturing
- Assisted in research for agent-free manufacturing for the Fraunhofer Institute
- Assisted in quality control preparations and procedures
- Programmed Siemens LOGO control units

### VEKA AG

*Student Assistant*

Sendenhorst, Germany

September 2019 – October 2020

- Assisted in commissioning and packaging

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## PROJECTS AND FURTHER EDUCATION

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### Self-Study

Ahlen, Germany

#### Personal Projects

August 2023 – Present

- Deepening programming knowledge in modern technologies
- Conceptualization, programming, and design of a professional personal website
- Development and implementation of software development, web design, and technology projects to gain practical experience and expand skills
- Self-directed learning and application of new techniques

### Ruhr-Universität Bochum | Lehrstuhl für Produktionssysteme

Bochum, Germany

#### Master's Thesis

October 2022 – est. August 2024

- Development and implementation of an innovative AI-based system for detecting assembly steps in manual assembly using advanced computer vision techniques
- Analysis and modeling of human movements and activities using AI algorithms to improve human-machine interaction
- Contribution to the optimization and efficiency enhancement of worker assistance systems through the use of artificial intelligence and machine learning

### Cademy GmbH

Ennepetal, Germany

#### Bachelor's Thesis

August 2021 – March 2022

- Independent development and conception of a mobile, collaborative robot system to increase efficiency in the foaming process of the automotive industry
- Development of an autonomous system for precise detection of tool positions and their openings to increase production flexibility and reduce manual interventions
- Successful construction and testing of a functional prototype that can be used in real industrial environments

## VOLUNTEERING

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### Volkshochschule Ahlen

Ahlen, Germany

#### Volunteer

October 2022 – March 2023

- Trainer for students

### Ingenieure ohne Grenzen e.V.

Bochum, Germany

#### Candidate

November 2019 – February 2020

- Developed a brick press for disadvantaged groups in Africa

## SKILLS AND INTERESTS

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**Programming:** Python, C/C++, Html, SPS, Robot Programming (Universal Robots)

**Software:** Jupyter Notebook, PyCharm, Inventor, SolidWorks, Plant Simulation, Matlab, Word, PowerPoint

**Languages:** Fluent in German, Aramaic, and English

**Personal Interests:** Weightlifting, Traveling, and Board Games

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