Karim **Abou Zeid**

Ph.D. student in Computer Vision

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Experience

Ph.D. Student in Computer Vision
May 2023 - Present

Computer Vision Group, RWTH Aachen *Germany*

- I am working on 3D scene understanding, as part of a project funded by Bosch.

`Python` `PyTorch` `3D Scene Understanding`

Research Assistant
Oct 2021 - Mar 2023

Computer Vision Group, RWTH Aachen *Germany*

- I helped with the implementation and evaluation of deep learning models and strengthened my PyTorch skills.

`Python` `PyTorch` `NeRF`

Research Assistant / Developer
Apr 2017 - Sep 2021

Algebra and Number Theory, RWTH Aachen *Germany*

- As part of a small team, I developed and implemented mathematical algorithms in C++ with the goal of adding support for non-commutative Gröbner basis theory to the computer algebra system Singular.

`C++` `C` `Unix` `Singular` `Abstract Algebra` `Gröbner Bases`

Software Developer
Aug 2015 - Dec 2022

Self-employed *Germany*

- I developed Phonograph, a successful music player for Android. Later on, I developed Iron, a workout tracker for iOS. Both apps were written using the native platform technologies, and were later open-sourced.
- I also worked on various commercial web projects for clients.

`iOS` `Swift` `SwiftUI` `Android` `Java` `TypeScript` `React`

Education

Master of Science in Computer Science
Apr 2019 - Jan 2023

RWTH Aachen *Germany*

- Thesis: Exploring Self-supervised Pre-trained Point Transformers for 3D Vision Tasks *(Grade: 1.0)*
- Minor: Mathematics

`Computer Vision` `Machine Learning` `Abstract Algebra`

Bachelor of Science in Computer Science
Oct 2015 - Mar 2019

RWTH Aachen *Germany*

- Thesis: Letterplace Gröbner Bases their Implementation and Applications *(Grade: 1.0)*
- Minor: Mathematics

Technical Skills

Languages

`Python` `Swift` `Rust` `C++` `Lua` `TypeScript` `React` `HTML + CSS`

Technologies

`Unix` `SysAdmin` `Neovim`

Languages

German Native

English Fluent

Personal Interests

`FOSS` `Unix` `Text Editors` `Rust` `Reading` `Powerlifting` `Motorcycling`