

# Bishoy Roufael

**Software Developer**

[bishoyroufael.github.io](https://bishoyroufael.github.io)

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**Bishoy Roufael**

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## Experience

### FARO Technologies / Software Developer and Data Scientist

June 2020 -October 2020, Stuttgart, Germany

- Developed a state-of-the-art autoencoder neural network for denoising high resolution CT images using Keras. This allowed the company to better detect surfaces of the scanned objects and increase the accuracy of their surface determination algorithm.
- Worked on a neural network for 3D construction of voxel grids from single and multi-view CT projection images.

### FARO Technologies / Software Developer

October 2020 - June 2022, Stuttgart, Germany

- Developed a disparity retrieval neural network using Keras and Tensorflow for generating depth maps from structured light (SL) stereo images.
- Worked with different deep learning super sampling networks to superscale panoramic images.
- Researched and tested different augmented reality (AR) libraries.
- Built internal tools for localizing panoramic images in a scene.
- Researched point cloud compression methods and built internal tools for compressing point clouds.
- Worked with Amazon SageMaker on labeling aerial images and developed a semantic segmentation model for detecting different objects in the images.

## Skills

C++ | Python | Fortran | PyTorch | Keras | Node.js | React | React Native

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## Education

### Jacobs University Bremen / B.S Robotics and Intelligent Systems

August 2019 - June 2022, Bremen, Germany

- Minor : Computer Science

## Awards

### JacobsHack 2021 / [Lighthouse](#)

November 2021

- Developed a backend service with Fortran for our lost and find web app and deployed it on google cloud platforms.  
[atlnts-backend](#)

