

# Stanislav Arnaudov

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Karlsruhe, Germany



## EDUCATION

### Master of Science in Informatics

Karlsruhe Institute of Technology

Expected Sep 2020

Karlsruhe, Germany

- **Relevant Coursework:** Image processing, Computer Vision, Machine Learning, Software Engineering

### Bachelor of Technology in Informatics

Karlsruhe Institute of Technology

Sep 2015 - Sep 2018

Karlsruhe, Germany

- **Relevant Coursework:** Linear Algebra, Algorithms and Data Structures, Operating Systems, Software Engineering, Cognitive Systems, Computer Graphics, Mobile Computing, Databases

## SKILLS

### Programming Languages

C++, Python, Java, JavaScript\CSS\HTML, SQL, Emacs-Lisp

### Technologies

Linux, Git, CMake, make, Robot Operating System (ROS), RabbitMQ, JavaFX/Java-Swing, JUnit, Maven, Frontend (AngularJS, VueJS), Backend (NodeJS, Express, Flask), LaTeX, Emacs Org-mode, UML

### Libraries

PyTorch, TensorFlow, Keras, Scikit-Learn, Numpy, Pandas, PyTorch, OpenCV, PCL (Point Cloud Library), OpenNI

## EXPERIENCE

### Software Engineer\Research Assistant

Fraunhofer IOSB

Sep 2017 - Present

Karlsruhe Germany

- **Image Processing:** Working with OpenCV, implementing detection and tracking of a laser point.
- **Point Cloud Processing:** Working with PCL, processing and using point-cloud information for automatic visual inspection systems.
- **Software Development:** Developing and extending visual inspection systems for industrial applications.

### Teaching Assistant in Linear Algebra

Karlsruhe Institute of Technology

Sep 2016 - Mar 2017

Karlsruhe Germany

- **Responsibilities:** Checking homeworks and giving a class once a week.

### Teaching Assistant in Algorithms and Data Structures

Karlsruhe Institute of Technology

Apr 2017 - Jul 2017

Karlsruhe Germany

- **Responsibilities:** Checking homeworks and giving a class once a week.

### Volunteer

Karlsruhe Institute of Technology

Jul 2018

Karlsruhe Germany

- **Responsibilities:** Helping with the organization of the [EGSR 2018](#) computer graphics conference.

## PROJECTS

- **Bachelor Thesis:** Creating and Evaluating Stochastic Regression Models on the Basis of Heterogeneous Sensor Networks for Air Pollution
  - Implementing stochastic regression models with Tensorflow, Edward and GPFlow.
  - Evaluating stochastic regression models on the basis or proper scoring rules
  - Writing out a thesis and presenting the collected results.
- **Practical Course in Software Engineering:** NGram++
  - Developing a single page application for analyzing and visualizing time series data.
  - Designing and implementing the architecture of the application.
  - Working in a team of 5 people.

- **Practical Course in Applied Geometry:** C++ Geometry Library
  - Modeling, analysis, reconstruction and simulation of geometric data.
  - Extending a library by analyzing and implementing algorithms for B-splines, parallel curves, tensors surfaces and curvature visualization.
- **Course Project:** Smart Homeworks
  - Single page application for helping with the organization of homework assignments.
  - Written in VueJS.
- **Co-Maintainer of an Emacs package:** [Neotree](#)
  - Neotree - tree file browser for Emacs.
  - Fixing bugs, implementing new features and helping with issues on the GitHub repository.

## ADDITIONAL EXPERIENCE & ACHIEVEMENTS

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- Co-author of a conference paper based on my bachelor thesis – Stochastic Regression Models for Improving Data Quality, Calibration and Interpolation of Air Pollution Data from Distributed Sensor Networks of Low-Quality Sensors ([Researchgate Item](#)).
- Part of a team that ranked second in the ([Code-2-Cloud Hackathon](#)), organized by Merck and Accenture (8.07.2019 - 13.07.2019 in in Kronberg\Darmstadt).
- Doing Open Source as a hobby by fixing bugs and implementing features in different projects on GitHub.
- Author of several small Emacs packages.
- Spoken languages: German, English, Bulgarian