

Stanislav Arnaudov

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EDUCATION

Master of Science in Informatics

Karlsruhe Institute of Technology

Expected Sep 2021

Karlsruhe, Germany

- **Relevant Coursework:** Image processing, Computer Vision, Machine Learning, Software Engineering
- **Practical Courses:** Practice in Research

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, Go, 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), OpenGL3/4, LaTeX, Emacs Org-mode, UML

Software Libraries

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

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

- **Practical Course in Scientific Research:** [Towards Bringing Together Numerical Methods for Partial Differential Equation and Deep Neural Networks](#)
 - Developing a personal research project.
 - Investigating the current State-of-the-Art approaches.
 - Developing a concrete research proposal.
 - Conducting the actual project, performing experiments, summarizing results and drawing conclusions.
 - Writing a paper that illustrates the results of the project.
- **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 of 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.
- **Personal Project:** [Alisp](#)
 - A general purpose programming language based on a Lisp
 - Written in C++ and currently has around 25 000 lines of code.
- **Personal Project:** [Anything](#)
 - A 3d game engine written from scratch in C++ using OpenGL4.
- **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

- 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 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