Stanislav Arnaudov

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Karlsruhe, Germany

Education

Master of Science in Informatics — Expected Sep 2020
Karlsruhe Institute of Technology — *Karlsruhe, Germany*

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

Bachelor of Technology in Informatics — Sep 2015 - Sep 2018
Karlsruhe Institute of Technology — *Karlsruhe, Germany*

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

Skills

Languages

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

Technologies

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

Libraries

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

Experience

Software Engineer\Research Assistant — Sep 2017 - Present
Fraunhofer IOSB — *Karlsruhe Germany*

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

Teaching Assistant in Linear Algebra — Sep 2016 - Mar 2017
Karlsruhe Institute of Technology — *Karlsruhe Germany*

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

Teaching Assistant in Algorithms and Data Structures — Apr 2017 - Jul 2017
Karlsruhe Institute of Technology — *Karlsruhe Germany*

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

Volunteer — Jul 2018
Karlsruhe Institute of Technology — *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

- Co-author of a 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).
- Doing Open Source as a hobby by fixing bugs and implementing features in different projects on GitHub.
- Author of a several small Emacs packages.
- Spoken languages: German, English, Bulgarian