

Jan-Christoph Klie

COMPUTER SCIENCE DOCTORAL STUDENT

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Education

TU Darmstadt UKP Lab

DARMSTADT, GERMANY

PH.D COMPUTER SCIENCE

JAN 2018 – PRESENT

I am a PhD student working on the [INCEption](#) project where I investigate interactive annotation for NLP. Currently I research how several annotation tasks, e.g. creating corpora with linked entities or predicate-argument structures can be supported by interactive machine learning. You can find my staff page [here](#). I am also interested in Reinforcement Learning, Semantic Parsing, Semantic Role Labeling, Distant supervision and Online Learning.

Topic: *Interactive Annotation for Natural Language Processing*, supervised Prof. Dr. Iryna Gurevych

TU Darmstadt

DARMSTADT, GERMANY

M.SC. COMPUTER SCIENCE

OCT 2014 – OCT 2017

Focus of my studies were Robotics, Machine Learning (supervised and reinforcement), Computer Vision, Natural Language Processing, Software Engineering and minor in Control Theory.

Thesis: *Deep learning for FrameNet semantic role labeling*, supervised by Teresa Botschen and Prof. Dr. Iryna Gurevych

DHBW Mannheim

MANNHEIM, GERMANY

B.SC. APPLIED COMPUTER SCIENCE

OCT 2011 – SEP 2014

Integrated degree program with IBM Germany. Each semesters' time was roughly split in half for lectures at university and internships with topic of choice at the partner company. Focus was on software engineering and business competencies.

Thesis: *Yggdrasip: An Internet of Things platform based on SIP*, supervised by Prof. Dr. Christian Bürgy

Städtisches Gymnasium Borghorst

STEINFURT, GERMANY

ABITUR (FINAL SECONDARY SCHOOL EXAM)

2002 – 2011

Advanced course in math and physics

Technical Skills

PROGRAMMING LANGUAGES

Experienced Java, Python, LaTeX

Familiar C, C++, Cython, HTML/JavaScript/CSS, Julia, Kotlin, Matlab, Scala, SQL

Dabbled in Clojure, Dart, Elixir, Erlang, Go, Perl, PHP, Ruby, Rust

TOOLS

Experienced Android, Keras, pytorch, ROS, Spring

Familiar Arduino, Docker, Git, Gradle, Hadoop, Jenkins, Keras, Node.js, OpenCV, tensorflow

Work Experience

TU Darmstadt UKP Lab

DARMSTADT, GERMANY

RESEARCH PROGRAMMER AND SYSTEM ADMINISTRATION LEAD

JAN 2018 – PRESENT

As part of my PhD funding, I do software development for a research project. We develop [INCEption](#), a semantic annotation platform offering intelligent annotation assistance and knowledge management. Together with my supervisor, I implement core functionalities, take part in the project management, popularize the tool on conferences and workshops as well as lead student helpers. I also manage the system administration group for our department of ≈ 35 people. We maintain and extend a mixed infrastructure of Linux and Windows servers and work stations consisting of an Exchange environment, several CPU and GPU servers as well as a virtual infrastructure. I am the first point of contact when something IT related does not work, create the IT plan for our lab and am the contact person in IT for our labs' professor. Under my regiment, we heavily modernize our infrastructure, e.g. we switched virtualization from Xen to Proxmox and are currently rolling out our own SLURM job scheduling.

Technologies used: Java, CI with Jenkins, Liquibase, Spring, Hibernate, Debian, CentOS, Proxmox, Exchange, Active Directory

STUDENT EMPLOYEE

Senacor Technologies AG

FRANKFURT, GERMANY

SOFTWARE DEVELOPMENT FOR AN ONLINE PAYMENT SYSTEM

AUG 2016 – SEP 2017

Software development for a banking IT consultancy. The project I am assigned to is a new, modern online payment system supported by the largest banks in Germany. Like my team members, I contribute to the implementation of user stories for our customer and finish them in the sprint. This includes testing and deployment on staging environments. I mainly work on the back end, the Android app and technical improvements for the infrastructure.

Technologies used: Android, CI with Jenkins and Docker, Event Sourcing/CQRS, Java 8, Micro Services, Mongo DB, Scrum, Spring

TU Darmstadt Control Methods and Robotics

DARMSTADT, GERMANY

SOFTWARE DEVELOPMENT FOR UNIVERSITY ROBOTS LAB

JUL 2015 – MAR 2016

For the robot lab of the control theory group at TU Darmstadt, I developed some core infrastructure. It was, among others, a (ROS) software package for a proprietary stereo camera mounted on Robotinos. To evaluate the localization algorithms developed by other (PhD) students, I implemented a ground truth based on four ceiling cameras. It can detect markers attached to the top of the robots and fuses the position from each single camera into the world frame.

Technologies used: C++, Linux, OpenCV, Python, ROS

IBM Deutschland GmbH NGNCC

FRANKFURT, GERMANY

INTERNET OF THINGS MIDDLEWARE WITH LoRa

OCT 2014 – JUL 2016

Goal was to develop a scalable IoT-Middleware which can connect things of the internet, (e.g. sensors and actuators) of any manufacturer. Starting point was the platform I built during my Bachelor's thesis. I mainly developed the back end, which connects and manages devices and serves data to the front end. Also, we started using LoRa for communication, which is a low power wide area network protocol to connect devices to our platform.

Technologies used: C, C++, Java, Arduino, Python, SIP, Linux, PostgreSQL, LoRa

INTERNSHIPS DURING INTEGRATED STUDY PROGRAM

IBM Deutschland GmbH NGNCC

FRANKFURT, GERMANY

6. M2M-COMMUNICATION ON A PREEXISTING TELECOMMUNICATIONS INFRASTRUCTURE

MAY 2014 – SEP 2014

This is the internship I did during which I wrote my Bachelor thesis. Goal was to develop a prototype home automation/IoT platform which uses an already existing telecommunications infrastructure. Requirements were that it can connect devices independent of the protocol it speaks by abstracting that part out. The result was a running proof of concept which had Arduinos and Raspberry Pi connected serving as a weather station and providing localization via GPS. The data was displayed in real time on a web page.

Technologies used: AngularJS, Arduino, C, C++, HTML/CSS, Java, JavaScript, Node.js, Python, SIP, WebSocket

IBM Tivoli System Automation for z/OS

BOEBLINGEN, GERMANY

5. INTEGRATION OF MONITORING DATA IN IBM DASH

NOV 2013 – FEB 2014

Task was to integrate the data of an already existing legacy monitoring application into a modern, newly developed web dashboard for a proof of concept. The fleshed out version by my tutor is now widely used to monitor IBM mainframes.

Technologies used: IBM DASH, IBM Tivoli Monitoring, RHEL, Java

IBM Dalian Global Delivery Company Limited

DALIAN, CHINA

4. SUPPORT IN IBM WATSON APPLIANCE

MAY 2013 – AUG 2013

I supported the CIOLab Watson Sales Assistant Team in China. They are among other things responsible to develop products out of the Watson technology. Watson is an artificial intelligence that is famous to have won 'Jeopardy'. In that very department, it was used for IBM intern knowledge management that can be queried by natural language. My task was to improve the accuracy and precision of the responses by mining internal and external data sources.

Technologies used: Java, Machine Learning, MyBatis, MySQL, Natural Language Processing, Spring

IBM Deutschland Research & Development GmbH

BOEBLINGEN, GERMANY

3. IMPROVING APACHE HADOOP WITH IBM FILE SYSTEM

NOV 2012 – FEB 2013

IBM offers many big data solutions. One of them is 'Big Insights', a fork of the famous Apache Hadoop. I replaced the default distributed file system HDFS by a file system developed and heavily used by IBM called GPFS. I then tested whether this replacement performs better and is more fault tolerant.

Technologies used: Bash, GPFS, Hadoop, Java, Python, RHEL

IBM Deutschland EAS GmbH

BADEN-BADEN, GERMANY

2. JEE-CONSULTING/DEVELOPMENT AS PART OF IT MODERNIZATION

JUL 2012 -- AUG 2012

Within the scope of a customer project in the tourism industry, we migrated the IT previously based on AS/400 terminal applications to JEE. My task was to write part of the web interface for buying contingents of flights and hotel rooms from other tour operators.

Technologies used: HTML/CSS, Java, JEE, JSF, MySQL, PrimeFaces

IBM Deutschland GmbH - GTS

MAINZ, GERMANY

1. MULTI-VENDOR-STORAGE SUPPORT TOOL DEVELOPMENT

FEB 2012 -- APR 2012

The IBM MVS Storage CoC in Mainz offers support for storage systems of other vendors. These do not give away their own internal tools for diagnosis and monitoring to other companies. Therefore, a fellow student and I developed a web application that generically analyzes and visualizes log files of all the storage systems IBM offers support for.

Technologies used: HTML/CSS, JavaScript, PHP

Languages

German Native language

English Full professional proficiency

Chinese Conversational Level