LUKAS JANSEN

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PROFESSIONAL SUMMARY

HARD SKILLS

- OOP in Java SE on an advanced level
- Software Testing with jUnit
- Basics of Java EE, used in my high school research project
- Profound Debian-Linux skills
- SGE experience
- Working with electronics
- Basics of C++, Python, SQL
- Wet lab experience
    - Biochemical: Protein Purification, ELISA, DNA cloning
    - Bioprocessing: Fermenting, DSP
    - Microbiology
    - Cell cultures
    - Instrumental Analytics
    - NGS Library Prep and Sequencing
- Basics of Docker containers, docker-compose
- Machine Learning using Weka
- Version control with Git
- R on an advanced level for statistics and plotting
- Microbial Genome Analysis

SOFT SKILLS

- Comfortable with presentations
- Organizing projects
- Personal use of time tracking and a GTD system
- Teaching

WORK HISTORY

UAS EMDEN/LEER, BACHELOR THESIS WORK, 07/2019 – 06/2020

My bachelor thesis applied my skills in bioinformatics to develop a fully automated workflow for whole genome shotgun metagenome analysis. Besides combining many common analysis steps, a custom phylogenetic method was developed to find reference genomes for a bin. Every step in the pipeline produces an interactive report to compare the samples.

UAS EMDEN/LEER, STUDENT ASSOCIATE – RESEARCH ASSISTANT, 01/2019 – 1/2020

Due to the time intensive lab courses in my fifth term I took a break from my tutoring job, but already started working on a project by my bioinformatics professor on methylome patterns. All processing heavy steps were implemented in multithreaded Java programs, as well as the first SGE parallelization, but later I switched to Snakemake to describe the whole workflow. The data visualization/reporting was done in a Rmarkdown file with ggplot2 plots and to be able to actually work with the data in R, I used the ff library to construct virtual data frames stored as binary data on the hard drive.

I also volunteered in the Hive Health university project, in which the goal was to develop an apiary weighing scale and software platform. I used the espressif ESP32 with an Arduino compatible library and constructed an easy adaptable MQTT sensor node.

UAS EMDEN/LEER, STUDENT ASSOCIATE – PROGRAMMING TUTOR/SYSADMIN, 03/2018 - 06/2018

Due to a number of vacant posts and a server crash over the term breaks the automatic scoring test software setup and tasks for the programming 2 course were lost. In addition to my teaching responsibilities, I deployed a “KIT-Praktomat” software setup, trying to preserve maintainability using Bash scripts for instance administration and integrating it with the university Shibboleth system.

UAS EMDEN/LEER, STUDENT ASSOCIATE – PROGRAMMING TUTOR, 10/2017 - 01/2018

In the first programming lectures, the bioinformatics professor noticed my already advanced skills, as I spent time during my middle and high school years with reading books on Java programming, object-oriented patterns and Linux administration, as well as working on smaller projects from time to time, so he offered me a teaching position.

My tasks revolved around overseeing practical lessons, providing help and developing the tasks for the next run of the programming 1 course including scoring tests using jUnit and reflection.

EDUCATION

2016-2020:
Bachelor of Science in Biotechnology (Specialization in Bioinformatics) at the University of Applied Sciences Emden/Leer

2016:
A-levels at the Mariengymnasium Jever: 1.5 (Advanced courses: Biology, Physics, Mathematics; Bilingual education, Seminar course: Microcontrollers)