Pfotenhauerstraße 13
01307 Dresden

Timo Nicolai

Born Aug 1994, German

+49 1590 2130817
timo.nicolai94@gmail.com
Time0o.github.io

EDUCATION

TU Dresden: Diplom (B. Sc. + M. Sc.) Information Systems Engineering, GPA: 1.1 **Oct 2016 – (July 2021)**

TU Dresden: Undergraduate Studies in Electrical Engineering **Oct 2014 – Oct 2016**

KTH Stockholm: Exchange Studies in Electrical Engineering and Computer Science **Jan 2019 – June 2019**

Fördegymnasium Flensburg: Abitur (High School Diploma), GPA: 1.0 **Aug 2005 – June 2014**

WORK EXPERIENCE

Kernkonzept GmbH, Dresden: Software Engineering Intern **June 2019 – Oct 2019**

- Developed a guest debugger extension for the uvmm hypervisor using C++

ZEISS Corporate Research and Technology, Jena: R & D Intern **Aug 2018 – Dec 2018**

- Worked with agile team on defect detection machine learning research project
- Used Python for data acquisition/analysis and training of neural networks

Kernkonzept GmbH, Dresden: Student Employee **Sep 2017 – July 2018**

- Implemented tests for the L4Re operating system using C++ and Google Test
- Created a Lua tool for verification of L4Re startup scripts
- Improved analysis of benchmark data with custom Python library

Center for Advancing Electronics, Dresden: Student Assistant **Feb 2017 – Sep 2017**

- Developed a Linux backend for a distributed computing framework using C

SONOTEC GmbH, Halle (Saale): R & D Intern **Feb 2016 – Sep 2016**

- Developed IMU position estimation algorithms with MATLAB
- Built and programmed ARM microcontroller based hardware prototype boards

PROJECTS

MPSym: Map Tasks to Multicore Systems: `github.com/mpsym`

- Uses computational group theory to efficiently map tasks to cores
- Implemented in C++ with bindings to Python

CPPBind: Generate C++ Bindings: `github.com/Time0o/CPPBind`

- Uses Clang's LibTooling library to generate C and Lua bindings to C++ code
- Extensible to new languages via a Python API

Deep Colorization of Grayscale Images: `github.com/Time0o/colorful-colorization`

- From scratch PyTorch implementation based on paper by Zhang et al.
- Includes preprocessing and training scripts for new datasets

TECHNICAL SKILLS

- Programming Languages: C, C++, Python, Haskell, Lua, Bash, Assembly, Verilog
- Tools and Technologies: Linux, Git, Make, CMake

LANGUAGES

- German: native, English: fluent

REFERENCES

Available on request