CHARLOTTE *REDACTED*

›RESUME

ABOUT ME

› I am Charlotte Elisabeth *Redacted*, a systems programmer and hacker from Germany. Online, I go by Lizzy Fleckenstein.

› I have been programming and using Linux since the age of 11, and I love writing software in C and Rust.

› I am fascinated by systems programming, graphics programming and game engine development, and I am looking to work on challenging, complex projects both in my free time and professionally.

› I daily-drive Artix Linux and I am passionate about Open Source and gaming on Linux. I have built up a large portfolio of OSS contributions and projects over the years.

› I have always been a self-sufficient learner - most of my technology skills are self-taught. I can find my way around unfamiliar codebases quickly, and I am not shy to approach and solve challenging problems even with little previous knowledge.

CONTACT

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LANGUAGES

German: native speaker
English: B2+/C1

EDUCATION

Sep 2014 – Apr 2022: *Redacted* Gymnasium *Redacted*
GPA: 1.2 (equivalent to 3.8 in the US)

Oct 2022 – present: Technical University of Darmstadt
Bachelor of Computer Science

SKILLS

SEVEN YEARS
OF PROGRAMMING ON LINUX

SYSTEMS PROGRAMMING

- Design complex multithreaded C and Rust programs using ***pthreads*** and ***Tokio***
- Debug and optimize using tools such as ***gdb***, ***valgrind***, ***asan***, ***tsan*** and ***perf***
- Knowledge of the ***Linux*** syscall interface, buffering and asynchronous I/O

OPEN SOURCE

- Proficient knowledge of ***git***
- Maintain and contribute to Open Source software
- Use CI/CD and configure ***GitHub Actions***

GRAPHICS PROGRAMMING

- Access the ***OpenGL*** and ***wGPU*** APIs for rendering and GPGPU/compute using C and Rust
- Use graphics libraries such as ***GLFW***, ***GLUT***, ***libX11***, ***cairo***, ***freetype***, ***libpng***
- Write shaders in the ***GLSL*** and ***WGSL*** shading languages

LOW LEVEL PROGRAMMING

- Read, write and debug ***x86 assembler*** code
- Write bootloader and kernel code
- Use low-level debugging tools such as ***objdump***, ***readelf***, ***Ghidra*** and ***IDA***

NETWORK PROGRAMMING

- Design and implement ***TCP*** and ***UDP*** based network protocols using C, Rust and Go
- Find and patch gameplay security exploits in games / game engines
- Improve anticheat systems

BUILD SYSTEMS

- Use the ***GNU Make***, ***CMake***, ***Autotools***, ***Meson*** and ***Cargo*** build systems
- Adjust compiler flags for the ***GCC*** and ***Clang*** compilers and write ***GNU ld*** linker scripts
- Cross-compile programs and use ***MinGW*** and ***Winsock2***

OPERATING SYSTEMS

- Administrate the ***Ubuntu***, ***Debian***, ***Fedora***, ***Arch***, ***Gentoo*** and ***Alpine*** distributions
- Use ***FreeBSD***, ***OpenBSD***, ***Plan9*** and ***Windows 10***
- Write ***Docker*** files and use ***Wine***, ***QEMU***, ***KVM*** and ***VirtualBox***

WEB DEVELOPMENT

- Build browser games using ***JavaScript***
- Build web apps using ***Node.js*** and ***PHP*** and use the ***npm*** ecosystem
- Work with ***SQLite3***, ***MySQL/Mariadb***, ***PostgreSQL*** and ***MongoDB*** databases

ADDITIONAL SKILLS

- Use the ***Bash***, ***Python***, ***Lua***, ***Java***, ***Haskell*** and ***C++*** programming languages
- Formal verification of software using the ***Coq*** and ***Lean*** proof assistants
- Embed ***Lua*** as a scripting language into C/C++ and Go software