Finn Krein-Schuch

Curriculum Vitae

Brunhildstr. 13
10829 Berlin
☐ +49 1590 2683157
✉ finn@krein.moe
🌐 finn.krein.moe/en
🐙 sents

Team-focused problem solver looking for new challenges

Education

2022–2024	**Physics M.Sc. - Grade: 1.5**, *Freie Universität Berlin*
	○ **Focus**: numerical quantum physics
	○ **Thesis**: "A Tensor Network Study of the Spin-1/2 Heisenberg Antiferromagnet on the Floret Pentagonal Lattice"
2015–2022	**Physics B.Sc. - Grade: 1.7**, *Freie Universität Berlin*
2013	**Abitur - Grade: 1.6**, *Ulrichsgymnasium Norden*

Work experience

2018–2024	**System Administration**, *Physics Department FU Berlin*, Berlin
	○ Setting up and maintaining network and server infrastructure
	○ Setting up, managing, and developing IT services
	○ Maintaining the IaC (Infrastructure as Code) repository
	○ Writing scripts in Python and Bash
	○ Installing and configuring Windows and Linux computers
	○ Providing technical support for the use of scientific software
	○ Assisting with IT-related questions and issues
2014–2015	**Language Quality Assurance Tester**, *Babel Montréal*, Montréal
	○ Testing and correcting video games for functionality and language
	○ Logging QA tickets in Jira
	○ Creating documentation in Confluence
2013–2014	**Postman**, *Deutsche Post AG*, Marienhafe

Awards

2013	Graduation award: society of German chemists

Skills

	Level	Skill	Years	
Programming-languages	Proficient	Python	8	Libraries: NumPy, SciPy, pandas, matplotlib, PyTorch, JAX, Requests, SQLAlchemy
	Proficient	Julia	6	Numerical simulations, data analysis
	Proficient	Bash	6	Scripts for system administration
	Competent	Javascript	5	Web programming, NodeJS

Operating Systems	**Proficient**: Linux (Debian, Ubuntu, Arch, NixOS)
	Competent: Windows
Tools & Technologien	**Proficient**: Git, Github/Gitlab (CI), LaTeX
	Competent: Ansible, Docker, SQL
Techn. Fähigkeiten	Debugging, Code review, performance optimization, collaboration on technical projects

Skill levels: Basic knowledge → Competent → Proficient → Expert

Languages

German	Native speaker
English	Fluent
French	Basic

Projects (Selection)

System administration

NixOS Mailserver
- NixOS mailserver module based on Postfix and Dovecot
- **Features**: Webmail, spam filtering, backup, anti-malware scanning

Programming

Matrix Policy Generator, *Python*
- Generating of user and group policies for a matrix chat-server from LDAP database

Tensor network library: Simple Update, *Julia*
- Implementation of the "Simple Update" algorithm for quantum tensor network states
- Support for graph (PEPS) and hypergraph states (PESS)

Plugins for Radicale (CalDAV server), *Python*
- Authentification by LDAP/PAM
- Support of multiple access control and authentication backends
- Access control by ACL
- Improvement of the standard web interface

Contribution to Whitebophir (Web-Whiteboard), *Javascript*
- Added a selection tool
- Added mathjax support

Interests

- Programming
- Martial arts
- Drums
- Self hosting
- Pen-and-paper role-playing

Social commitments

- University politics: Student council, commission work, student parliament
- Foodsaving