Aktuelle Bachelorarbeitsthemen

Institut für Netzwerke und Sicherheit

Liveness-Check for face recognition

- How can cameras tell the difference between a living face and a mask/picture?
  - Try to fool our current implementation
  - Research and compare potential improvements

- Implement one of these approaches within our face recognition prototype

- Evaluate the effectiveness of your chosen solution

  Contact: Philipp Hofer

Using Tor as Web Backend

- Deploy a simple Web application using Tor Onion Services as for both the front end and the database

- Measure its response times and reliability to find out if this could be viable in practice

- Test if NoSQL Databases perform better/worse than traditional transactional databases

- Test if SPA (SinglePageApplications) perform better/worse than transactional databases

- Measure how the performance changes if only the backend is using an Onion Service

  Contact: Michael Sonntag

Security Analysis of the Linux Kernel in Mikrotik RouterOS

- MikroTik sells devices with their self developed RouterOS
  - Which is based on the Linux Kernel and therefore under the GPL

- We know the source code used to build the Linux kernel for RouterOS and we know the vulnerabilities that the Linux foundation has fixed over the last years

- Check if all security fixes for the Linux kernel have been correctly applied to RouterOS
  - Special attention should be given to remotely exploitable vulnerabilities
  - *Contact: René Mayrhofer*

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