Andreas Zeck

Electrical and Information Technology Engineering

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Summary

Aspiring Electrical and Information Technology Engineer with a passion for innovative technologies and information security, backed with multiple certifications in the latter. Working on a LoRaWAN-based agricultural monitoring project in collaboration with Auburn University. Developed network and process control skills at Siemens, and offers IT consultancy for tailored infrastructures. Assumes a leadership role in disaster relief with the Bavarian Red Cross and represents students at the state level for the university.

Work Experience

SIEMENS AG — **September 2021 - present**
Dual Student (Bachelor + Apprenticeship) — Würzburg, Germany

- Involved in automating customer systems within critical infrastructure sectors, enhancing operational security and efficiency.
- Actively ensured compliance and prepared systems for information security standards and certifications, reinforcing data protection and cybersecurity measures.
- Led the renewal of departmental network infrastructure, incorporating advanced ESXi and Palo Alto technologies to bolster network security and performance.

Aronox — **January 2022 - present**
Freelancing — Bamberg, Germany

- Provides IT consulting and implementation for business networks and computer infrastructures, emphasizing custom, non-standard solutions that enhance efficiency and security.
- Specializes in leveraging Linux-based systems and open-source software to deliver innovative alternatives to proprietary solutions, optimizing client processes and infrastructure cost-effectively.

Julius-Maximilian University — **April 2020 - September 2020**
Research Assistant — Würzburg, Germany

- Engaged in penetration testing to highlight and demonstrate existing security vulnerabilities to professors, enhancing their awareness of current cybersecurity challenges.

Bavarian Red Cross EMS — **September 2018 - August 2019**
Federal Voluntary Service — Bamberg, Germany

Education

Technical University Würzburg-Schweinfurt — **October 2021 - February 2025**
Schweinfurt, Germany — B.E. Electrical and I.T. Engineering

Focus areas: Communications Technology, Automation and Robotics

SIEMENS AG — **September 2021 - February 2025**
Würzburg, Germany — Mechatronics Technician

Shortened Dual Apprenticeship and Bachelor Program

Julius-Maximilian University — **July 2019 - August 2021**
Würzburg — (B.S. Physics)

Studies paused due to COVID-19 impacts, leading to transition through recruitment by SIEMENS AG

Bavarian Red Cross — **September 2018 - May 2019**
Kitzingen, Germany — German Paramedic

Certifications

ISMS Auditor (ISO/IEC 27001:2022) **2023**
International Certification Organization

ISMS Security Officer (ISO/IEC 27001:2022) **2023**
International Certification Organization

AMS 19011:2018 PROFESSIONAL **2023**
International Certification Organization

ISMS 27001:2022 PROFESSIONAL **2023**
International Certification Organization

ISMS 27001:2022 FOUNDATION **2023**
International Certification Organization

Managing information security in compliance with ISO/IEC 27001 standards, including auditing management systems.

BSI IT-Grundschutz-Praktiker **2022**
Federal Office for Information Security

Managing information security in compliance with BSI 200, the national information security standard set by the Federal Office for Information Security in Germany.

Volunteering

Bavarian Red Cross - Crisis Intervention & EMS **2019 - present**
Deputy District Head of Information and Communication

- Applying paramedic skills to support and train in emergency care and IT infrastructure within volunteer EMS role.
- Managing communication tech as Deputy District Head, enhancing security for over 400 regional members.
- Experience managing crisis interventions locally, supralocally, and internationally, ensuring effective emergency responses.

Bavarian State Students' Council **2022 - present**
Delegate

- Representing the university at the state level in direct communication with the Ministry of Science and Arts to shape educational policies and laws.

THWS (student Representation) **2022 - present**

- **Speakers' Council**: Shaped university governance and established key bureaucratic roles, reflecting leadership in student representation.
- **Faculty Council**: Streamlined academic updates and resource decisions, promoting collaboration between students and faculty.
- **Access Rights Coordinator/Appointment Committee**: Directed student access and professorial appointments, showcasing strategic university improvement efforts.

Chaos Computer Club e.V. **2018 - present**
ERFA chairperson for Bamberg

Actively engaged in shaping IT and security stances in Germany as Bamberg's ERFA Chairperson within the Chaos Computer Club e.V., supporting event operations at the Chaos Communication Congress as volunteer and ensuring participant safety as a medical responder.

Backspace e.V. (Makerspace) **2018 - present**

Fostered digital freedom and inclusivity through technology education and leading initiatives like "Freifunk" at Backspace e.V., enhancing community access to free internet.

Volunteer Fire Brigade Bamberg **2019 - present**

Enhanced emergency response capabilities as a paramedic and IT coordinator, leading projects like the alerting system upgrade and actively engaging in frontline firefighting operations.

Languages

German
Native

English
Fluent in spoken and written

Skills

DevOps & System Administration

Docker, KVM, Proxmox, ZFS, ESXi, PaloAlto PAN-OS, Sophos Firewall, Ansible, Git, Veeam Backup

Programming & Development

Python, C++, Java, TIA-Automation, MQTT, XML/XSL, JSON

Web & Database Technologies

HTML/PHP, CSS, SQL, TYPO3, WordPress, Grav, Nextcloud

Science & Research

MatLAB, Mathematica, Origin, Gnuplot, Latex

Radio Communications

Software Defined Radios, TETRA-Hardware, LARDIS, TetraControl, DIVERA, GQRX, RFAnalyzer

Hardware & Embedded Systems

Siemens S7 + Unified HMI, Siemens Logo, Ubiquiti Network Equipment, Arduino, ESP8266/32, Raspberry Pi, Laser Cutter (CO2 80W), 3D Printer (Ultimaker/Bambu Lab/Prusa), Betaflight Flight Controller F4/F7

Projects

Distributed Network for Agricultural Monitoring (w/ Auburn University)
https://sites.google.com/view/dnam-capstone/home

In collaboration with two international students from Auburn University, the DNAM project harnesses LoRaWAN and solar-powered LoRaLinks for advanced agricultural monitoring. This enables precision farming through real-time visualization of key parameters like soil moisture and temperature on a website with live mapping, integrating GPS data from each sensor.

The Bamberg Freifunk Project

Led a Freifunk community project to deploy and maintain a gateway in Bamberg, enhancing public Wi-Fi access across diverse venues by utilizing WireGuard peering and router meshing, showcasing a commitment to digital inclusion and expertise in cybersecurity and network infrastructure.

Digital Advancement in Emergency Response

Spearheaded the development of a digital alerting system using Divera24/7 and custom OCR software, enhancing emergency response by ensuring rapid, role-specific dissemination of critical information to brigade members' devices and operational displays

Jugend Forscht - Hydrogen Electrolysis
https://www.esfz.nat.uni-erlangen.de

Development of a cost-effective, efficient hydrogen electrolysis and fuel cell supported by the Friedrich-Alexander university of Erlangen (Germany) for the bavarian youth research competition "Jugend Forscht".

References

References available upon request
More information is available at https://azeck.info.