MarioTheuermann

Engineering Professional | Software Engineering • Data Science • Teamwork

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📱 +43 - censored - | 📇 Graz/Villach, Austria

"Engineering is the practice of learning."

EDUCATION

GRAZ UNIVERSITY OF TECHNOLOGY

Software Engineering & Management

Diplom-Ingenieur (M.Sc.)

📅 April 2018 - June 2022 | 📍 Graz, Austria

Major: Intelligent Systems
Minor: Management & Strategy

Bachelor of Science

📅 Oct 2014 - April 2018 | 📍 Graz, Austria

SKILLS

Operating Systems

 macOS x86-64/ARM64
🐧 GNU/Linux x86-32/64/ARM64

Linux Distributions

Debian • Arch • RHEL

Paradigms & Practices

Agile (DevOps, XP, Scrum)
Git-flow • OOP • RESTful

Languages

C • C++ • Bash • Python • Java
Kotlin • JavaScript • AsciiDoc • LaTeX

Databases

SQL • Couchbase NoSQL

Libraries & Frameworks

Pandas • NumPy • SciPy • Scikit-learn
Matplotlib • Seaborn • Plotly • OpenCV
PyTorch • TensorFlow (Keras) • ROS

Tools

Docker • VirtualBox • KVM/QEMU • Vagrant
Conda • Pyenv(-virtualenv) • Poetry
Git • Gitlab CI/CD • Jira
Vim • Tmux • POSIX commands and terminal
utilities

Communication

English (C1/2-level) • German (native)

EXPERIENCE

SKYSPECS | Data Scientist

📅 July 2023 - present | 📍 Graz, Austria & Ann Arbor, MI

- Develop and extend algorithms to address critical challenges in the wind industry, such as the production loss assessment, pitch misalignment detection, performance analysis, and more, focusing on broad applicability and efficiency for large wind farm portfolios.
- Work primarily in Python to conduct data manipulation, analysis, visualization, and interpretation of large-scale time-series data in combination with other data sources such as meteorological data, error, or maintenance logs.
- Use statistical and machine learning methods to analyze, classify, cluster, and interpret SCADA (Supervisory Control and Data Acquisition) data of individual wind turbines, in order to enhance operational efficiency by identifying anomalies and performance issues.
- Lead the transition of final prototypes to production, including big-scale testing and integration into the existing software infrastructure, for monthly execution across more than 6000 client wind turbines.
- Enhance the engineering process by leading the introduction of a novel Python microservice architecture that serves various statistical and other computations as RESTful APIs.

JOANNEUM RESEARCH | Research Assistant

📅 Oct 2020 – June 2022 | 📍 Graz, Austria

- Engineer computer vision applications to enhance real-time object detection and pose estimation capabilities of a drone, using only imagery from its calibrated camera.
- Construct a robust data acquisition pipeline from a highly accurate infrared-based tracking system, utilizing the Robot Operating System (ROS), to generate a suitable dataset for algorithm development and testing.
- Configure containerized solutions for NVIDIA Jetson embedded computing devices.
- Prepare and deliver detailed interim reports and presentations for the FFG (Austrian research funding agency), highlighting project progress, key findings, and strategic recommendations to ensure stakeholder alignment and continued project funding.

Publications:

- Automated Data Annotation for 6-DoF AI-Based Navigation Algorithm Development.
  Journal of Imaging **2021**, 7, 236.
- Protocol Design Issues for Object Density Estimation and Counting in Remote Sensing.
  IGARSS **2021**, pp. 2771-2774.

COURSEWORK

M.Sc. degree program

Knowledge Discovery & Data Mining
Machine Learning
Deep Learning
Web Technology
Expert Systems
Verification & Testing
Security Aspects in Software Development
General Management & Organization
Change Management
The Art of Feeback
Intercultural Social Competence

B.Sc. degree program

Data Structures & Algorithms
Statistics & Probability
Linear Algebra & Analysis
Computer Vision & Graphics
Computational Intelligence
Operating Systems
Software Maintenance
IT Security & Networking

INTERESTS

PROFESSIONAL

- Data Science and Data Engineering
- Automation Pipelines, Containerization, and Virtualization
- Intelligent Systems, Machine Learning, and Deep Learning
- Operating Systems and Linux Distributions
- Cryptology, Privacy, and System Security

PERSONAL

- Music: Expressing my love for music through extravagant and overly priced headphones while actively blocking out the remaining world around me.
- Sports and Health: I enjoy keeping my body healthy and fit through strength training in my home gym to compensate for the sedentary profession.
- Nature: Growing up in the mountains of Carinthia, I get a kick out of fresh air in peaceful and mountainous surroundings.

BYTEPOETS | Junior Developer

📅 Aug 2018 – April 2019 | 📍 Graz, Austria

- Build and maintain responsive websites and user interfaces using HTML and modern frameworks like Spring and Bootstrap, ensuring scalability, cross-platform compatibility and optimal user experience.
- Design and develop mobile applications for iOS and Android platforms, focusing on seamless integration and robust functionality.
- Implement RESTful web services interfacing with various databases such as Couchbase NoSQL and SQL, ensuring efficient data retrieval and storage.
- Facilitate continuous integration and continuous delivery (CI/CD) processes using Jenkins, enhancing development workflows and deployment efficiency.
- Employ Agile project management methodologies to streamline project execution and enhance team collaboration and productivity.

IAIK | Intern

Institute of Applied Information Processing and Communications

📅 Aug 2017 – Nov 2017 | 📍 Graz, Austria

- Develop and optimize a custom Linux distribution tailored for specific applications using the Yocto Project.
- Implement encryption protocols to secure large parts of the system memory in a QEMU emulation environment, aiming to enhance data protection and security.
- Deploy custom Linux distribution images to ARM-based Xilinx Zynq7 Systems on Chip (SoC) and test system operation.

LAM RESEARCH | Electrical Engineer

📅 Sept 2012 – Sept 2014 | 📍 Villach, Austria & Fremont, CA

- Participate in the electrical assembly and prototyping of novel Lam-platform designs in Fremont, California.
- Support engineering activities such as design, test, modification, fabrication, and assembly of prototype electromechanical systems and experimental design circuitry.
- Conduct structured diagnostics and troubleshoot a broad range of hardware, software, and networking issues, ensuring system integrity and performance.

SEZ & LAM RESEARCH | Electrical/Test Engineer

📅 Sep 2006 – Sept 2012 | 📍 Villach, Austria

- Perform, evaluate and supervise electrical assembly of SEZ and Lam Research etch platforms as well as special customer requests.
- Contribute improvements to the configuration and documentation of mechanical drawings, wiring diagrams and internal test records.