# **Daniil** Aktanka

Sustainable Systems Engineer

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## Experience

### STM MINERALS AG — Technical Assistance Engineer

**Aug 2020 - Jul 2023 | Baden, CH**

- Directed initiation, planning and execution project phases of an industrial-grade IoT hardware product and cloud service for both internal and external use. Spearheaded system engineering design as well as programming development. Launched a new, internal, company database.

  **Specifics:** The product enables remote PLC data readout (Allen-Bradley & Siemens), local-hardware backup & sync and server data collection (MariaDB). The system supports integration with realtime cloud-based dashboard visualization and data processing (Grafana).
- Created and maintained a MATLAB App Designer application software tool (3k+ lines) for company mill-sizing purposes. The tool features multiple internal data-structures, dynamic UI elements and elaborate plot visualizations with built-in data model extrapolations. Approved for use by both sales and engineering departments.
- Assessed and systematized methodology for grinding-media filling-level computation. Proposed additional uncertainty correction methods to account for slurry density variation using 3D linear data extrapolation. Collaborated on industrial product design solution.

Engineer intern

**Aug 2019 - Jul 2020 | Baden, CH**

- Investigated temporal relationship between strain-gauge voltage and grinding-media filling-level. Performed data cleaning and analysis in python via pandas and XGBoost machine learning.
- Designed and developed a VBA UserForm script (1k+ lines) for efficient document parsing and automation. Simplified commissioning engineers' workflow and improved team's performance by reducing test-report document processing time by ≈83% per project.
- Consulted in electrical-engineering document standardization. Designed and created standardized templates for piping and instrumentation diagrams.

## Projects

### POWER FLOW SIMULATION ANALYSIS | python (pandas, pandapower)

**2023**

- "Electric Vehicles in Energy Communities: Investigating the Distribution Grid Hosting Capacity (BSc SSE thesis)". Proposed a semi-coordinated energy-community EV charging pattern with a 30% improvement of grid stability for low-voltage European grids, based on historical data.

### CUSTOM FIRMWARE/HARDWARE KEYBOARD | C (QMK)

**2022**

- Modified an existing PCB hardware design (split ortho) and devised a personal 34-key layout on firmware level with macro functionality.

## Education

### MSC TECHNOLOGY MANAGEMENT

**Sep 2023 - 2024**

University College London

### MANAGEMENT ESSENTIALS COURSE

**Jul 2022**

Harvard Business School online

### BSC SUSTAINABLE SYSTEMS ENGINEERING

**Sep 2020 - 2023**

University of Freiburg

## Skills

### PROGRAMMING

**Experienced:**

Python • MATLAB • LaTeX

**Familiar:**

SQL • VBA • git • C • shell

### SOFTWARE

**Prefficient:**

Microsoft Office • Visio • Adobe Photoshop/Lightroom

### LANGUAGES

**Native/C1 diploma:**

English • Russian • German

**Confident/B2.1 level:**

French

## Interests

### HOBBIES

Photography • Art