

# 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  $\approx 83\%$  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 •  $\text{\LaTeX}$

Familiar:

SQL • VBA • git • C • shell

### SOFTWARE

Proficient:

Microsoft Office • Visio • Adobe Photoshop/Lightroom

### LANGUAGES

Native/C1 diploma:

English • Russian • German

Confident/B2.1 level:

French

## INTERESTS

### HOBBIES

Photography • Art