AI Data Science in Power Quality and Device Digitization

Christian D. Basile

Silicon Power Corporation

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Project 1: Static Transfer Data Analysis

Objective: Assist power clients in evaluating power quality using high-resolution log data from static transfer systems.

- Developed Python algorithms to ingest and analyze time-series logs from static transfer switches.
- Extracted metrics related to voltage sags, swells, and waveform stability.
- Delivered automated reporting for power quality diagnostics.
- Enabled actionable insights into transient events impacting system stability.

Project 2: OCR + Deep Learning for Device Classification

Objective: Build a scalable solution to digitize and classify electrical product logs.

- Used OCR to extract metadata from scanned files and schematic images.
- Employed convolutional neural networks (CNNs) to classify products by type and performance signature.
- Developed data integration pipeline to populate internal product databases.
- Reduced manual entry burden while improving data consistency across records.

Summary: Silicon Power Projects

- Applied deep learning and time-series analytics to electrical engineering challenges.
- Automated insights and classification from raw logs and images.
- Enhanced power quality assessment and internal product intelligence.

Thank You

Questions or collaboration ideas?

christian.daniel.basile@gmail.com

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