

ABHIJITH SIVAPRASADAN

M.Sc. Sustainable Energy Engineering (KTH, 2026) | Test Engineering | DAQ Systems | Gas Turbines
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PROFILE

Test and instrumentation engineer completing an M.Sc. at KTH with hands-on experience commissioning NI-DAQ measurement chains, operating a high-temperature gas turbine test rig independently at Siemens Energy Finspång, and conducting formal root cause analysis of hardware failures. Python for data analysis and signal processing. Fully open to relocating to Berlin and to international travel.

EXPERIENCE

Master Thesis Student / Contract Test Engineer

Siemens Energy AB, Fluid Dynamic Lab, Finspång

Apr 2025 - Nov 2025

- Commissioned NI-DAQ measurement chains from scratch: wired thermocouples, configured static and dynamic pressure sensor channels in NI MAX, implemented signal conditioning, and verified measurement chain integrity end-to-end before each campaign.
- Modified LabVIEW VIs to add logging channels, adjust sampling rates, and implement software-side conditioning. Authored new VI sections for automated data export and real-time monitoring during test runs.
- Ran independent thermal test campaigns at ambient, 400 degrees C, and 700 degrees C across multiple pressure conditions. Documented all parameters, anomalies, and observations systematically throughout each campaign.
- Conducted a formal root cause analysis following a heater failure: eliminated candidate causes, identified ceramic insulation damage on heater leads as the root cause, documented findings, and delivered a recommendation that resulted in an approved scope change.
- Numerical phase: built compressible CFD and CHT models in ANSYS Fluent, conducted mesh independence study, and developed Python post-processing scripts for automated extraction and comparison of results.

Energy Efficiency Intern

Alleima AB, Sandviken (Remote)

Dec 2024 - Jun 2025

- Built Python workflows to compare operating states and identify anomalies in industrial process time-series data. Designed ISO 50001-aligned measurement and data quality frameworks.

Backend Engineer

QBurst, Thiruvananthapuram, India

Sep 2021 - Jun 2023

- Developed APIs and automated test workflows in agile teams using Python, Git, and JIRA. Strong transferable skills in systematic testing, version control, and structured documentation applicable to DAQ tool and pipeline development.

RELEVANT PROJECTS

ML Heating Demand Forecasting

KTH Course Project (Python, scikit-learn)

2025

- Built day-ahead heat demand prediction model achieving 93.7% accuracy. Applied feature engineering, time-series signal analysis, and error decomposition. Direct experience handling noisy measurement data, separating systematic bias from stochastic error, and automating evaluation pipelines in Python.

EDUCATION

M.Sc. in Sustainable Energy Engineering (expected 2026)

KTH Royal Institute of Technology, Stockholm

2023 - 2026

Thesis: Numerical Investigation of Steady-State Thermo-Fluid Performance of a Reducer for a High-Temperature Dynamic Pressure Sensor Calibration Rig. TRITA-ITM-EX 2026:14. Supervisor: Prof. Jens Fridh. Selected coursework: Numerical Heat Transfer in Energy Technology (grade A), Applied Heat and Power Technology, Methods of Research in Sustainable Energy, AI Applications in Sustainable Energy Engineering (grade A).

B.Tech in Mechanical Engineering

APJ Abdul Kalam Technological University, Kerala, India

2017 - 2021

Relevant coursework: Heat and Mass Transfer, Fluid Mechanics, Thermodynamics, Metrology and Instrumentation, Compressible Fluid Flow.

TECHNICAL SKILLS

Instrumentation / DAQ:	NI-DAQ, NI MAX, LabVIEW (VI authoring, data logging, signal conditioning, real-time monitoring), thermocouple commissioning, static and dynamic pressure sensor configuration, measurement chain validation
Data analysis:	Python (pandas, NumPy, SciPy, matplotlib, FFT and PSD signal analysis, scikit-learn), MATLAB, automated post-processing scripting
Gas turbine:	Seven months at Siemens Energy Finspång. Familiar with Siemens Energy engineering standards, rig operation, and documentation requirements.
CFD / CAD / PLM:	ANSYS Fluent (CHT, k-omega SST), ANSYS Meshing, SpaceClaim, Siemens NX, SolidWorks, Teamcenter PLM2020
Workflow:	Git, JIRA, Docker, MS Office

CERTIFICATIONS

SSG Entre / Industrial Safety (valid Jan 2025 - Jan 2028) | Applied CFD (Siemens) | IBM Python for Data Science | Digital Manufacturing and Design Technology (University at Buffalo)

LANGUAGES

English: professional proficiency | Swedish: beginner, actively studying | Malayalam: native | German: none, willing to learn