WILLIAM SANDVEJ HANSEN

Data Engineer

grusinator@gmail.com 40371757 Sømose Hegn 78, st. 2, 2750 Ballerup
Capital Region of Denmark, Denmark william-sandvej-hansen grusinator

Summary

With a robust background in data engineering and software development across multiple industries, I bring a wealth of expertise and a proven track record to SimCorp. My experience at Energinet and Ørsted in developing and managing complex data solutions, including utilizations of Azure and cloud architectures, directly complements the innovative direction of SimCorp's Digital Engagement Platform. I am adept in modern engineering principles, including Agile and DevOps methodologies, and have a strong commitment to enhancing data quality and system scalability. My collaborative spirit and creative problem-solving abilities are geared towards contributing significantly to SimCorp's continuous growth and excellence in SaaS solutions.

LANGUAGES

- Python
- SQL
- JavaScript
- C#

PERSONALITY

Eager · Motivator · Creative · Debator · Teamplayer

SKILL MATRIX

name	level	last used	years of exp.
Data Modeling	●●●●○	2022	4
Data Transformation	●●●●○	2022	4
Data Engineering	●●●●○	2023	5
DevOps	●●●●○	2023	3
Data Visualization	●●●○○	2023	4
Agile Software Development	●●●●○	2023	4
Containerization	●●○○○	2022	3
CI/CD	●●●●○	2023	4
.NET	●●●○○	2020	2
Microsoft Azure	●●●●○	2023	3
Python	●●●●●	2023	6
C#	●●●●○	2020	2
SQL	●●●●○	2023	4
Azure Data Factory	●●●●○	2023	1
Spark	●●●●○	2023	2

EDUCATION

Master of Engineering - MEng, Earth and Space Physics and Engineering
Danmarks Tekniske Universitet
2014 – 2016

Bachelor of Engineering (BEng), Electrical and Electronics Engineering
Syddansk Universitet
2010 – 2014

EXPERIENCE

Data Engineer

Energinet

December 2022 – October 2023 Copenhagen, Denmark

As a data engineer at Energinet, i was responsible for developing a data project collecting massive amounts of data from the energy island in denmark, from various providers. The main goal was to recieve, perform quality control, and deliver data to the developers wanting to bid on the project. In order to quality control and unpack these wide range of binary offshore sensor data files, we relied on spark and databricks to be able to scale, while at the same time allow for the flexibility of the various data formats. Just to name a few, GDB, DFSU, segy, xtf etc. Some of these datasets had to be unpacked for QC, analytics and visualization purposes, so in order to support geospatial data in spark i used sedona (geospark) to be able to store data in delta parquet format and to perform spatial partitioning on the dataset using geohashing, in order to improve read performance.

python · spark · databricks · GDB · DFSU · segy · xtf · sedona · geospark · parquet · geohashing

Data Engineer

Ørsted

March 2020 – November 2022 Copenhagen, Denmark

As a data engineer I have been developing a data validation component as a part of our data pipelines, with configurable inputs for what to validate, developed in python, relying on pandas as data abstraction, integrated using Azure Service Bus. I have also been involved with the data modelling in order to provide easy to understand and consume data for various analytics tools. MS Sql Server, Rest api. In order to do iterate faster when implementing the right data model, we used python, sqlalchemy and Sqlite, to implement a mock db, mimicking the production environment, and to test the changes before implementing it, avoiding changes in api and data pipeline. I have also developed different data analytics and visualization tools in python using streamlit, Panel, Dash and bokeh, that helps engineers to make interpretations based on the data. At Ørsted i have been using the SAFE framework for project management, Devops has been relying on Azure devops, Docker and K8S.

Python pandas Azure Service Bus MS SQL Server REST API sqlalchemy SQLite streamlit Panel Dash bokeh SAFE Azure DevOps Docker Kubernetes

IT Consultant

Netcompany

November 2018 – November 201 Copenhagen, Denmark

At Netcompany i have been working at big projects building custom IT solutions with multiple integrations. The primary tools that i have been using as a backend developer was Oracle, Groovy, REST and a bit of Javascript. For project management and version control Jira and Git with SCRUM.

Oracle Groovy REST JavaScript Jira Git SCRUM

Softwareudvikler

NIRAS

September 2016 – March 2018 Allerød, Denmark

At Niras i have been developing geodata algorithms for data transformation, including processing of lidar data, and images. I have among other developed an image classifier that can identify buildings in spectral orthophotos. I have also developed a model that can based on lidar and gis road data, identify the height profile of the roadsides, and identify the need and cost for cleaning the roadside. This was developed in C# using Postgres, postgis, with parallel processing capabilities. At Niras i have also been developing various plugins for QGIS, using Qt and Python.

lidar image processing C PostgreSQL PostGIS QGIS Qt Python

Engineer

KK Wind Solutions

March 2014 – August 2014 Ikast, Denmark

At KK wind solutions I was hired for a project of a half year where I was investigating the effort of switching out a communication chip for the IO boards in the wind turbine control system. This was due to inducing flexibility in the product configuration. This project involved programming the chip in C, investigating communication protocols as Ethercat profinet etc.

C EtherCAT PROFINET

Instructor

Det Tekniske Fakultet, Syddansk Universitet

September 2013 – January 2014 Odense, Denmark

instructor in Electronics courses teaching basic analog circuit design.

Internship Electronics

VELUX

February 2013 – June 2013 Skjern, Denmark

During my time at Velux I developed a PCB for loading a solar panels. This PCB was meant for testing the durability of solar panels for the automated Velux windows.

PCB design

PROJECTS

development-workforce

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ai-test-project

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