

## Daniel Florin Stefan

Data Engineer

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### PROFILE

Robust Data Engineer with a background in chemical and pharmaceutical engineering and 2 Masters degrees. Quality oriented honey badger for complex or esoteric technical challenges. Extremely quick learner, solid documentation and process skills and foolproof hand-in of even the most advanced deliverable. Trustworthy, thoughtful and easy to like.

### CORE COMPETENCY

Cloud Engineering, Data Engineering, Cloud Infrastructure Building/Maintenance, Technical Documentation

### PROJECT EXPERIENCE

#### **Large Operational Fintech Supplier – Raunow Consulting ApS**

**October 2024 – Present**

##### **Data Engineer**

- Data Engineer working on Enterprise Data Warehousing Tasks
- Maintenance of ETL jobs, Exploratory Data Analysis for identifying and fixing data consistency issues, implementation of new features, bug fixes
- Agile Workflow implemented using Azure DevOps

**Technological highlights:** Teradata SQL, Agile, DevOps

#### **Muskelsvindfonden – Raunow Consulting ApS**

**March 2024 – Present**

##### **Data Engineer**

- Data Engineer working as an external consultant on building and maintaining the Power BI reporting for GRØN Koncert and Cirkus Summarum Events
- Maintenance and optimization of existing reports, building new reports
- Designing and building a solution for near real time operational reporting using Microsoft Fabric

**Technological highlights:** PowerBI, Azure SQL Server, Microsoft Fabric

#### **Lowell – Raunow Consulting ApS**

**November 2021 – December 2024**

##### **Data Engineer**

- Data Engineer working as an external consultant for Lowell on establishing a cloud-based data analytics platform on Microsoft Azure
- Main role is supporting the data migration and data architecture development on Microsoft Azure. This includes tasks such as database backup, maintenance of database servers and data migration pipelines,

writing and review of documentation and maintenance of reports monitoring various aspects of cloud resource usage and access.

- Constructing and maintaining reports monitoring EntraID access, data quality checks, azure resource usage and data movement pipelines
- Implementing a data retention procedure for an on-prem SQL database and the downstream data lake using Databricks
- Building an azure function used for comparing and identifying discrepancies between glossary terms that are registered in Azure Purview in multiple environments.
- DevOps and CICD design and setup: assessing current CICD implementation and writing proposal for implementing a complete CICD solution for the entire platform
- Creation and maintenance of an aggregated data store consisting of multiple databases on an existing on-prem SQL server that are populated by SSIS jobs. This involved creating databases, establishing proper access, maintaining the SSIS jobs and creating additional stored procedures for aggregating data for use by data analysts.

**Technological highlights:** Data Factory, Databricks, MS SQL Server, Azure SQL Server, Azure Synapse Analytics, Powershell scripting, PowerBI, Azure DevOps, GitHub, SSIS.

### **Danske Bank – Raunow Consulting ApS**

**March 2022 – December 2023**

#### **Data Architect**

- Working in direct support of high-level design architecture by producing architectural documentation and verification and viability POCs
- Assessed the viability of using Spline package (<https://absaoss.github.io/spline/>) to track data lineage on AWS Data Lakes
- Contributed to submitting documentation describing how target data architecture complies with the client's Enterprise Data Architecture principles.
- Created data flow diagrams describing a variety of the systems implemented in the client's overall data architecture.

**Technological highlights:** Draw.IO, Microsoft Visio.

### **NpInvestor.dk – Raunow Consulting ApS**

**November 2022 – December 2022**

#### **Data Engineer**

- Data Engineer working as an external consultant on the underlying data infrastructure of the website.
- Fixed a data update issue, collected, and filled in historical data that was missing because of said issue.
- Monitored and verified the adequate performance of the cloud resources on which the website infrastructure was built to rule out the possibility of this infrastructure being the cause of website downtime.

**Technological highlights:** AWS EC2, AWS RDS.

### **Elixir Tools and Data Services Registry – DTU**

**August 2018 – December 2018**

#### **Student Assistant**

- Student Assistant participating in the expansion of the Elixir Tools and Data Services Registry, specifically the bio.tools registry.
- Identified and added over 200 new tools to the registry.
- Contributed to maintaining up to date ORCID identifiers for the underlying publications of the registered tools.

**Technological highlights:** GitHub, CRAN.

## **PROSYS Group – DTU**

**January 2018 – July 2018**

### **Master Student**

- Master thesis on the study of multi-mineral precipitation in fermentation broths with the aim of creating a software tool that can predict the kinetics of mineral precipitation in the broths, a project that was a collaboration between the group and Novozymes.
- I performed the precipitation experiments, collected, and analysed the data generated and used it to establish the mathematical models to be implemented in the software tool.
- In the first phase I performed titration experiments on and proof of concept design to validate the modelling approach used.
- In the second phase I moved on to using an experimental broth composition for the experiments and managed to successfully predict mineral precipitation within the broth.
- Initially water analysis kits were used to measure ion concentrations, however these proved to be largely inaccurate, so the final measurements were done using ICP-MS instead.
- I was commended by my supervisors for being able to handle both data acquisition (experiments and analysis) and data modelling for the project.

**Technological highlights:** MatLab, pH titration, ICP-MS, Fermentation Processes.

## **Region H – Bartholin Institute**

**July 2015 – September 2015**

### **Research Assistant**

- Research Assistant working on a research project to develop immunotherapeutic treatments for Type I Diabetes
- As a research assistant I participated in daily tasks necessary for the continuation of the project: cell culturing, isolation of immune factors from animal blood plasma through Gel-Chromatography, administration of treatment to laboratory animals and monitoring treatment performance, in-vitro experiments on antibody function.
- I successfully recovered and processed months-worth of experimental data from NOD-mouse treatments that had been poorly collected.

**Technological highlights:** Gel Chromatography, Affinity Chromatography, ELISA.

## **Photonics Department – DFM A/S**

**January 2015 - March 2015**

### **Research Assistant**

- Research Assistant working in support of the company's role as a provider of metrological standards and consulting.
- I built a graphical user interface for a mass flow meter device that is used for the mixing of gas standards. This first required the calibration of the device and implementation of said calibration into the graphical user interface. The entire work was done using Python.
- I validated a tuneable light filter by interfacing it with a spectrophotometer and a CCD camera and taking measurements of colour standards. The entire setup was built and automated using MatLab.

**Technological highlights:** Python, MatLab, UV-VIS Spectroscopy.

## **Department of Pharmacy – KU**

**November 2012 – June 2013**

### **Master Student**

- Master thesis on developing a chemometrics-based model that can detect and quantify particle segregation in pharmaceutical powders using NIR-Spectroscopy. The project was part of the move towards establishing tools to ensure good manufacturing practices in the pharmaceutical industry.

- I conducted the experimental part of the project on a mixture of cellulose and caffeine to establish a proof of concept for the model. The experiments were done for varying particle sizes of the two components. I used various custom experimental setups to test the viability of the model.
- I used a chemometrics-based approach for the model development. This involved using tools such as MatLab and LatentiX for chemometric analysis. The viability of the model was assessed by comparing model predictions to actual initial concentrations for the experimental setups.

**Technological highlights:** LatentiX, MatLab, Chemometrics, NIR-Spectroscopy.

### **Organic Chemistry Department – “Politehnica” University of Timisoara**

**September 2010 – June 2011**

#### **Bachelor Student**

- Bachelor thesis on the synthesis of asymmetric tioethers with pharmaceutical properties and the design of an installation for diethylchlorosuccinate production.
- I conducted organic synthesis experiments to obtain novel tioethers with pharmaceutical properties.
- I used diethyl chlorosuccinate as a reactant for etherification. The various methods I tried out in its synthesis led to the publication of an article in the University’s chemical bulletin.
- As part of the project requirements, I also designed an installation for the synthesis of diethyl chlorosuccinate. The installation design consisted of mass and thermal balance calculations for the synthesis reaction and the construction of a diagram for the entire production process.

**Technological highlights:** AspenHySis, Organic Chemistry, Gas Chromatography, GC-MS, Thin-layer Chromatography, IR-Spectroscopy.

## **WORK EXPERIENCE**

### **Data Engineer | Raunow Consulting ApS**

**November 2021 – Present**

(raunow.dk/consulting)

The company provides consulting services in the realm of Data Architecture. My role as Data Engineer is to act in support of the design and implementation of the solutions provided and engage in technical knowledge dissemination through the production of video tutorials.

**Technological highlights:** Data Factory, Databricks, MS SQL Server, Azure SQL Server, Azure Synapse Analytics, Powershell scripting, PowerBI, AWS EC2, AWS RDS, Draw.IO, Microsoft Visio.

### **Student Assistant | Danmarks Tekniske Universitet, Elixir Tools and Data Services Registry**

**August 2018 – December 2018**

(5 months)

The Elixir Tools and Data Services Registry is a database of open-source tools, developed for use in research and development in biochemistry, biology, and medicine. My job was to contribute to the expansion of the database, by researching and aggregating tools in these fields, from recent scientific publications.

**Technological highlights:** GitHub, CRAN.

### **Research Assistant | Bartholin Institute, Region H**

**July 2015 – September 2015**

(3 months)

The Bartholin Institute in Copenhagen is part of Rigshospitalet, that focuses on diabetes

research. I worked as a research assistant on Carl-Henrik Brogrens project, for developing an immunotherapeutic treatment for Type I diabetes.

**Technological highlights:** Gel Chromatography, Affinity Chromatography, ELISA.

**Research Assistant | DFM A/S – Danmarks Nationale Metrologiinstitut  
January 2015 – March 2015**

(3 months)

Danmarks Nationale Metrologiinstitut is an accredited laboratory and research institution operating in multiple areas, including photonics. My role as research assistant was to support scientists conducting metrological and optics research.

**Technological highlights:** Python, MatLab, UV-VIS Spectroscopy

**EDUCATION**

**Master of Science in Chemical and Biochemical Engineering | Danmarks Tekniske Universitet  
September 2016 – June 2019**

My thesis title was “multi-mineral precipitation in fermentation media: an experimental and modelling assessment”. The purpose of the work was to establish a mathematical model that could predict and quantify mineral precipitation in fermentation broths. The work entailed collecting kinetic data of precipitation of processes using titration and measurements with ICP- MS. The modelling approach was based on previous research on wastewater treatment and model implementation. The simulations were done using MatLab.

**Master of Science in Pharmaceutical Sciences | Københavns Universitet  
September 2011 – July 2013**

My thesis title was “Approaches at method development for assessing vibration-induced segregation in pharmaceutical powders using near-infrared spectroscopy”. The purpose was to develop a model for quantifying segregation in pharmaceutical powders by using chemometrics on NIR data. The work entailed conducting experiments, to simulate vibration-induced segregation and recording NIR spectra of the resulting mixtures. The modelling approach consisted of doing PCA and PLS analysis on recorded NIR spectra of un-segregated mixtures. Modelling work was done using MatLab and LatentiX.

**Bachelor of Engineering in Industrial Chemistry | ”Politehnica” University of Timisoara  
September 2007 – August 2011**

I specialized in Organic Chemistry and my thesis consisted of two parts: the design of an installation to produce diethyl chlorosuccinate, and an experimental study of the synthesis of novel triazole tioethers with pharmaceutical activity. For the experimental part, the main analysis methods used were, TLC, IR Spectroscopy, GC and GC-MS. The installation design included mass and thermal balance calculations for a given batch size, and schematic designs of the installation itself, and the automation schema.

**CERTIFICATES**

**Azure DevOps Engineer Expert (AZ – 400) | Microsoft 2023**

**Azure Administrator Associate (AZ – 104) | Microsoft 2023**

**Azure Data Engineer Associate (DP – 203) | Microsoft 2023**

**Azure Enterprise Data Analyst (DP – 500) | Microsoft 2022**

**Azure Data Fundamentals (DP – 900) | Microsoft 2022**

## **LANGUAGES**

**Romanian**

**English**

**Danish**

## **INTERESTS AND HOBBIES**

Since I was a child, my interests revolved around a deep passion for epic stories. This inevitably led to the discovery of literature, especially of fantasy and science fiction variety. Reading is something I spend a good deal of my free time on. I also write myself, and two of my short stories got published because of participating in a writing competition. Over time I have also become interested in other avenues of storytelling, such as video games and even music. The love for music led me to learn how to play guitar, which is also a hobby I go back to from time to time.

## **EXTRA-CURRICULAR ACTIVITIES**

**Project Manager at Local chapter of GRASP (Global Romanian Society of Young Professionals)  
May 2012 – January 2015**

GRASP is a Romanian NGO founded in 2008 with the purpose of creating a platform for connecting Romanian professionals that work in all corners of the world but still wish to use their skills to contribute to the improvement of Romanian society. I was part of the initial team that founded the Copenhagen Local Chapter, and my role was that of project manager. In this role I coordinated with the local chapter president to adequately ensure the allocation of resources to our ongoing projects, and I monitored their progress and successful implementation. Among these were a mentorship project for newcomers in Copenhagen, an exchange with the members of GRASP Amsterdam and the successful organization of the Annual GRASP Conference in Copenhagen in 2014.

## **Competency Matrix**

<b>Technology</b>	<b>Skill</b>	<b>Last Used</b>
<b>Category - Programming Languages</b>		
Python / R	Experienced	2024
MatLab	Advanced	2018
<b>Category - Other Languages</b>		
SQL (T-SQL, MySQL)	Experienced	2024

PowerShell	Advanced	2024
Azure CLI	Advanced	2024
<b>Category – Cloud Services</b>		
Azure DevOps	Experienced	2024
Azure Data Factory	Experienced	2024
Azure Databricks	Experienced	2024
Azure Synapse Analytics	Advanced	2024
Azure SQL Server	Experienced	2024
Microsoft SQL Server	Experienced	2024
Azure Logic Apps	Advanced	2023
Azure Functions	Advanced	2024
Power BI	Experienced	2024
AWS EC2 (Linux)	Advanced	2023
AWS RDS (MySQL)	Advanced	2022
<b>Category – Data Architecture</b>		
Draw.IO	Advanced	2024
Microsoft Visio	Advanced	2023
Microsoft PowerPoint	Advanced	2024
<b>Category – General Tools, Utilities and Frameworks</b>		
Microsoft SQL Server Management Studio	Experienced	2024
SSIS	Experienced	2024
MatLab	Advanced	2018
Excel	Advanced	2024
Git	Advanced	2024
GraphPad Prism	Advanced	2015
<b>Category – Chemical and Biochemical Analysis</b>		
Spectroscopy	Experienced	2018
pH titration	Advanced	2018
<b>Category – Chemical and Biochemical Engineering</b>		
Process Design	Advanced	2018
Physico-chemical modelling	Advanced	2018

Fermentation Processes	Advanced	2018
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