

# Maximilian Becker

## Basic Information

Address:	Grossmatte 30, CH – 6014 Luzern
Phone:	+41 79 550 77 68
E-Mail:	maximilian.becker1993@gmail.com
Date of birth:	12. January 1993
Website:	<a href="http://maxbecker.ch">maxbecker.ch</a>
Nationality:	German
Hobbies:	Travelling, Powerlifting, Rock Climbing Beach Volleyball



## Education

03.2022 – 07.2024	<b>Master of Science – Lucerne University of Computer Science and Information Technology</b> Specialisation: Data Science Master of Science in Engineering – Data Science
09.2017 – 07.2021	<b>Bachelor of Science – Lucerne University of Computer Science and Information Technology</b> Major: Data Science & Engineering Bachelor's Degree in Business Information Technology
08.2009 – 08.2013	<b>Apprenticeship Mediamatiker EFZ</b> Vocational matriculation qualification Place of work: Urner Kantonalbank

## Work Experience

06.2024 – 08.2024	<b>Predictive Maintenance Consultant, Alpamayo, Sarnen</b> <ul style="list-style-type: none"> <li>Structuring, analyzing and presenting extensive customer data sets</li> <li>Development and optimization of machine learning algorithms for anomaly detection in industrial time series data</li> <li>Implementation of machine learning solutions in production environments at customer sites, considering specific requirements and framework conditions</li> <li>Further development and optimization of our in-house data pipelines</li> </ul>
08.2021 – 05.2024	<b>Senior Data Analyst, SUISA, Zürich</b> <ul style="list-style-type: none"> <li>Design of complex reports using Power BI and various other tools</li> <li>Maintenance and design of the Data Warehouse and its tools</li> <li>Development of a complex Quality Assurance system which uses PowerBI and PowerApps to analyse anomalies which were detected using machine learning algorithms I helped create</li> <li>Change, incident, release and test management</li> <li>Database administration</li> <li>Azure administration</li> </ul>
10.2018 – 07.2021	<b>Application Manager, Luzerner Kantonalbank AG, Lucerne</b> <ul style="list-style-type: none"> <li>Support, maintenance and life cycle management of various apps, website sales of structured products with connection to core banking application (Avaloq)</li> <li>2nd and 3rd level application support according to ITIL processes</li> </ul>

- App developments, further development of the product homepage (structured products at LUKB)
- Change, Incident, Release and Test Management
- Introduction, support and configuration of test automation software (Eggplant): installation and configuration of software and server application (Mac iOS), setup of test devices (Apple, Android devices and configuration on server), scripting of test cases
- Support with migrations and adaptations
- Stakeholder Management

09.2014 – 09.2018

**Junior Business Consultant, Profidata AG, Urdorf**

- Support, maintenance, and life cycle management of XENTIS
- Receipt of customer issues at the service desk (telephone, mail, and issue tracking tool)
- 2nd and 3rd level application support according to ITIL processes
- Analysis, development of workarounds, prioritisation of errors, reproduction
- Testing of solutions and implementation of solutions by means of parameterisation
- Implementation of tests (integration tests and subject-specific tests) newer releases and fixes of the software (XENTIS Investment Management System)
- Coordination of the rollouts of releases and patches at the customer's site in test and production environments
- Parameterisation of releases and patches in test and production environments
- Incident management in the event of disruptions that prevent production: Analysis, escalation, workaround and coordination of the delivery of corrections via hotfix
- Stakeholder Management
- Implementation of application presentations for job applicants and new employees
- Repair of inconsistent tables, manipulation and intervention on live data (emergency scenario), SQL scripting for data migration for new customers
- Risk management and documentation
- Prioritisation, further development, and escalation at the product owner
- On-call service

10.2013 – 09.2014

**Team Member Costumer Care, Swissquote SA, Zürich**

- 1st Level Application Support according to ITIL processes
- Stakeholder Management
- On-call service

08.2009 – 08.2013

**Apprenticeship Mediamatiker EFZ, Urner Kantonalbank**

Apprenticeship as Mediamatiker

**IT Skills**

Work experience as well as theoretical: Data Science, Python, SQL, Machine Learning, Deep Learning, Databases, Software engineering

**Languages**

German:	Native language
English:	Business fluent speaking and writing skills (Certificate of Advanced English)

## University Projects

Timeframe	Title	Description	Used technologies
09.2023 – 06.2023	In-Database Machine Learning of Bayesian Classifiers with SQL	<ul style="list-style-type: none"> <li>IDBML uses databases to perform machine learning directly on large datasets.</li> <li>The thesis implements fast Gaussian Bayesian Classifiers in SQL databases.</li> <li>SQL-based classifiers outperform industry-standard ones.</li> <li>Existing database infrastructure makes IDBML efficient and cost-effective.</li> </ul>	SQL, Jinja2, Python, Gaussian Classifiers, MSSQL, Big Data
03.2023 – 07.2023	Implementing Neural Network Learning with SQL	<ul style="list-style-type: none"> <li>Continuation of the previous paper.</li> <li>Acceleration of the previous algorithm</li> <li>Writing a mathematical sound methodology</li> <li>Analysis of the usage of linear regression for learning the network's weights</li> </ul>	SQL, Jinja2, Python, MSSQL, Postgres, MySQL
09.2022 – 02.2023	Implementing Neural Network Learning with SQL	<ul style="list-style-type: none"> <li>Feasibility analysis and development of a prototype of a working neural network using SQL only</li> <li>Scientific Paper</li> </ul>	SQL, MSSQL, Postgres, MySQL
02.2021 – 06.2021	In-Database Machine Learning with SQL–Code–Generation in Python: Implementing a Multi–Class Decision Tree Classifiers for Mixed Data	<ul style="list-style-type: none"> <li>Bachelor's Thesis</li> <li>Implementation of a Decision Tree Classifier using SQL and Python.</li> <li>The basic principle is that in Python only metadata (Sufficient Statistics) is used, while the data never leaves the database.</li> </ul>	Python, SQL, jinja2, Pandas, Numpy, sqlite, MYSQL
02.2020 – 05.2020	Big Data Live Open Sky Analytics	<ul style="list-style-type: none"> <li>Usage of a live flight data API and streaming of said data into a database.</li> <li>Live analytics on a streaming broker</li> </ul>	Cloudera, Python, Linux (UNIX), HUE, Hive, Nifi, Kafka, Flink, FlinkSQLShell
02.2020 – 05.2020	Customer Clustering of a US–Superstore Shiny App	<ul style="list-style-type: none"> <li>Performing a k-means algorithm on a data set of an US superstore</li> <li>Formulating of business measures to be taken out of the findings of the algorithm</li> </ul>	Shiny, R, Machine Learning
02.2020 – 05.2020	FIFA Shiny App	<ul style="list-style-type: none"> <li>Performed explorative data analysis on FIFA player data und their skills, salary, and other attributes.</li> <li>Visualising of player features on different types of graphs, heatmaps and on a football pitch itself to discover correlations and outliers.</li> </ul>	Shiny, R
09.2019 – 12.2019	Plane Crash Visualization	<ul style="list-style-type: none"> <li>Development of a website to visualize historical plane-crash data.</li> <li>Interactive visualizations by country, aircraft type, number of fatalities and historical trends</li> </ul>	JavaScript, D3.js, HTML, CSS
02.2019 – 05.2019	Big Data Analytics of SBB delay notifications	<ul style="list-style-type: none"> <li>Development of a Big Data application from a data source to a data sink, to visual analysis</li> </ul>	Hadoop, HDFS, Python, pySpark,

		<ul style="list-style-type: none"> <li>• Contriving of an ETL process, to get data from an API, modify and save them afterwards.</li> <li>• Final visualisation of said data.</li> </ul>	Zeppelin, Ambari, Spark, LXC, Unix
09.2018 – 12.2018	Web App	<ul style="list-style-type: none"> <li>• Developing a Web App to find landmarks close to the user.</li> <li>• Development of frontend and backend</li> </ul>	HTML (DOM), CSS, jquery, JavaScript, php, Apache
02.2018 – 05.2018	Gastronomy Software	<ul style="list-style-type: none"> <li>• Development of a software for use in gastronomy for user management, record orders and send invoices.</li> <li>• Different clients for service and kitchen</li> </ul>	Java, JavaFX, RMI, PostgreSQL

## Work Projects

Timeframe	Title	Description	Used technologies
08.2021 – 05.2024	Implementing QA System with Power BI	<ul style="list-style-type: none"> <li>• Overview of 1000s of invoices</li> <li>• Anomaly detection with statistical methods</li> <li>• Abnormalities are reported and feedback is being written back into the database</li> </ul>	SQL, Python, PowerBI, PowerApps
08.2021 – 06.2022	Implementing tracking tool with Power BI	<ul style="list-style-type: none"> <li>• Tracking of invoices' internal workflow</li> <li>• Alerts when invoices are past due</li> </ul>	SQL, PowerBI

Die Hochschule Luzern verleiht  
**Maximilian Becker**  
geboren am 12. Januar 1993  
von Kaiserslautern, Deutschland

für das erfolgreich abgeschlossene Bachelor-Studium den Titel

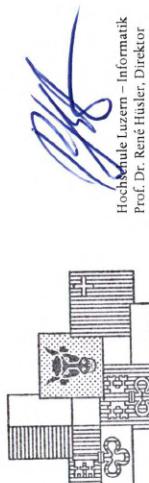
## **Bachelor of Science Hochschule Luzern/FHZ in Wirtschaftsinformatik mit Major in Data Engineering & Data Science**

Bachelor of Science Hochschule Luzern/FHZ  
in Business Information Technology with Major in Data Engineering & Data Science

Der Titel „Bachelor of Science Hochschule Luzern/FHZ“ (abgekürzt „BSc Hochschule Luzern/FHZ“) ist gemäss dem Hochschulförderungs- und -koordinationsgesetz HFKG in Verbindung mit der Zentralschweizer Fachhochschul-Vereinbarung und der Studienordnung für die Ausbildung an der Hochschule Luzern, FH Zentralschweiz, geschützt.

Die Kantone Luzern, Uri, Schwyz, Obwalden, Nidwalden und Zug bilden die Trägerschaft der Hochschule Luzern/FHZ Zentralschweiz.

Rotkreuz, 9. Juli 2021  
  
Fachhochschulrat  
Anton Lauber, Präsident



The Lucerne University of Applied Sciences and Arts hereby awards

## **Maximilian Becker**

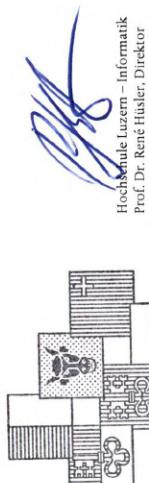
born on 12 January 1993  
from Germany

the following title for successfully completing the Master's degree programme

## **Master of Science Hochschule Luzern/FHZ in Engineering with Specialisation in Data Science**

The title „Master of Science Hochschule Luzern/FHZ“ (abbreviated to „MSc Hochschule Luzern/FHZ“) is protected under the Higher Education Funding and Coordination Act HEA in conjunction with the Lucerne University of Applied Sciences and Arts Agreement and the Academic Ordinance Governing Bachelor and Master's Degree Programmes at the Lucerne University of Applied Sciences and Arts, FH Zentralschweiz. The sponsoring body of the Lucerne University of Applied Sciences and Arts (FH Zentralschweiz) is composed of the Cantons of Lucerne, Uri, Schwyz, Obwalden, Nidwalden and Zug.

Rotkreuz, 12 July 2024  
  
Governing Council of the Lucerne University  
of Applied Sciences and Arts  
Stephan Keller, President





## **Transcript of Records**

<b>surname:</b>	<b>Becker</b>	<b>date of birth:</b>	<b>12 January 1993</b>
<b>first name:</b>	<b>Maximilian</b>	<b>matriculation number:</b>	<b>17-494-147</b>
<b>program of study:</b>	Master of Science in Engineering		
<b>field:</b>	Data Science		
<b>date of entry:</b>	<b>21 February 2022</b>	<b>graduation:</b>	<b>12 July 2024</b>

## List of Modules

module		type of module	ECTS	local grade(s)	ECTS
Academic Writing and Presenting		CM	A	5.5	3.0
Advanced Statistical Data Analysis		TSM	D	4.0	3.0
Analysis of Sequential Data		TSM	C	4.5	3.0
Data Management		TSM	B	5.5	3.0
Deep Learning		TSM	D	4.5	3.0
Machine Learing		FTP	B	5.5	3.0
Machine Learning in Computer Vision		TSM	D	4.5	3.0
Master Thesis, Split Part 1		FV	B	B	15.0
Master Thesis, Split Part 2		FV	B	B	15.0
Optimization		FTP	B	5.5	3.0
Predictive Modelling		FTP	C	5.5	3.0
Shaping Global Business		FV	D	5	3.0
Specialization Project 1		FV	C	C	12.0
Specialization Project 2		FV	B	B	18.0
Total ECTS <sup>3</sup>					90.0
GPA (US Scale) <sup>4</sup>					3.28

Transcript of Records  
29.07.2021 - page 2 of 14  
Program of Study: Bachelor of Science in Business Information Technology  
Students: Deegan Maximilian

Mathematics in Business IT II	R	I	4.5	D	3.0
International Law	R	B	4.0	E	3.0
IT Service Management	R	I	5.5	A	3.0
Machine Learning	R	I	5.5	B	3.0
Data Warehousing	R	I	5.0	C	3.0
Business Intelligence & Decision Support	R	I	5.0	C	3.0
Big Data Lab Sandbox	R	I	6.0	A	3.0
Practical Module 6 ECTS	R	I	passed		6.0
Big Data Lab Cluster	R	I	5.5	B	3.0
Data Science Basics	R	I	5.5	B	3.0
Practical Module 6 ECTS	R	I	passed		6.0
Digital Transformation in the Industry	R	I	4.5	D	3.0
Data Visualisation	R	I	5.0	C	3.0
Knowledge based Decision Systems	R	A	5.5	B	3.0
Practical Module 6 ECTS	R	I	passed		6.0
422_ISA diagnosing culture,art,space	M	B	D		3.0
Ethics	M	I	4.5	D	3.0
Anglo-Saxon Culture, Politics & History	M	B	5.5	B	3.0
Sustainability (intensive week)	M	B	C good		3.0
Total Credits					192.0

FH Zentralschweiz

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## **Transcript of Records**

**Surname:** Becker      **Date of Birth:** 12.01.1993  
**First Name:** Maximilian      **Matriculation Number:** 17-494-147

## **Program of Study: Bachelor of Science in Business Information Technology**

Module	Type of Module <sup>1</sup>	Local Grade <sup>3</sup>	ECTS Grade <sup>4</sup>	ECTS-Credits awarded	
Module	Level <sup>2</sup>	Local Grade <sup>3</sup>	ECTS Grade <sup>4</sup>	ECTS-Credits awarded	
Programming	C	B	5.5	B	6.0
Digital & IT Basics	C	B	4.5	C	3.0
Business IT English I - Digital Business - Advanced	C	I	5.0	C	3.0
Network Architecture & Web Technologies	C	B	5.5	B	6.0
<i>Network Architecture &amp; Web Technologies - Lab</i>			5.5		
<i>Network Architecture &amp; Web Technologies - Concepts</i>			5.2		
Finance & Accounting in Digital Contexts	C	B	5.5	B	3.0
Business IT English II - Strategic Management in IT - Advanced	C	I	5.0	C	3.0
Project and Teamwork	C	B	passed		6.0
Specialist Communication	C	B	4.0	D	3.0
Project Management Basics	C	B	4.5	C	3.0
Mathematics in Business IT I	C	B	5.5	B	3.0
Project Management & Requirements Engineering	C	B	4.5	D	3.0
Industry Project	C	I	4.5	D	6.0
Bachelor Thesis	C	I	5.0	C	12.0
General Management in Digital Contexts	C	B	5.0	A	3.0
Software Solutions and Business Processes	C	B	4.5	C	3.0
Strategic Management in Process-Oriented Context	C	B	5.5	B	3.0
Applied Statistics I	C	B	5.0	C	3.0
Information Security Fundamentals	C		4.5	C	3.0
Enterprise Application 1: Concepts	C	B	4.5	D	3.0
Data Management	C	I	5.0	C	3.0
Modeling Basics	C	B	5.0	C	3.0
Enterprise Application 2: Realization	C	B	5.0	C	3.0
Business Practice Project 1	C	I	passed		6.0
Business Practice Project 2	C	I	passed		6.0
Business Processes & Organisation	C	B	4.0	E	3.0
IT-Law	R	B	5.0	C	3.0
Management & Law	R	I	5.0	C	3.0
21st Century Workplace Communication - Advanced	R	I	5.0	C	3.0
The Art of Financial Investments	R	B	6.0	A	3.0
Big Data Management	R	B	5.0	C	3.0
Economics	R	B	5.0	C	3.0
Corporate Communications & Language Technologies	R	I	4.0	E	3.0
Applied Statistics 2	R	I	5.0	C	3.0



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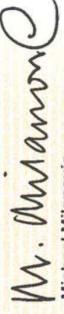
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Chief Executive

\*This level refers to the UK National Qualifications Framework

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### ITIL® Foundation Certificate in

## IT Service Management

This is to certify that

**Maximilian Becker**

Has achieved the

**ITIL® Foundation Certificate in  
IT Service Management**

Effective from **14 Mar 2021**

Expiry date **N/A**

Certificate number **GR671245427MB**

Candidate number **9980066319963420**



**Mark Baslam, CEO, AXELOS**

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französische Sprache Teilsoz. French	
Englisch	5.7
Anglische Sprache Teilsoz. English	
Geschichte und Staatslehre	5.3
Basiswissen Basiswissen historische Ereignisse History and other studies	
Volkswirtschaft / Betriebswirtschaft / Recht	4.8
Economics / Business Administration, Law Economie politique, économie aziendale, diritti Economia, Politica, Economia aziendale, diritti Economics, Business Management, Law	
Mathematik	5.5
Mathematische Methoden Numerical methods	
Schwerpunktfach	5.4
Finance- und Rechnungswesen	4.9
Gesamtpraktische Corporate Finance Contabilità finanziaria e pratico Accounting and Financial Management	
Ergänzungsfach	
Projektmanagement / IPDA	
Information communication technology Informationstechnologie und Kommunikation Intersoziale Projektarbeit Athenstesten, durch unser Verhältnis vermeidbar Titel: 5 Note: Fachber: Volkswirtschaft, Betriebswirtschaft, Recht, Geschichte Notendurchschnitt	
Erworben internationale Fremdsprachenzertifikate	5
CAE	



### Lehrabschlussprüfung Mediamatiker/Mediamatikerin 2013 Notenausweis detailliert

Name Becker  
 Vorname Maximilian  
 Adresse Dorfstr. 1  
 Wohnort 6376 Emmetten  
 Lehrberuf Mediamatiker  
 Lehraufer 2009 bis 2013

#### Individuelle Produktivarbeit (IPA)

Fachnote (zählt doppelt) 5.2

#### Angewandte Fachkenntnisse

Betriebswirtschaftliche Kenntnisse 5.0  
 Informations-/Kommunikationskenntnisse 5.0  
 Erfahrungsnote 5.2

Fachnote 5.1

#### Berufskundlicher Unterricht

Fachnote 5.0

#### Allgemeinbildende Kenntnisse

befreit

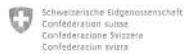
#### Gesamtnote

5.1

#### Prüfung bestanden

Sursee, 25. Juni 2013

Ingrid Kaczmerczyk  
 Fachbereichsleiter Mediamatiker



hat das Qualifizierungsverfahren bestanden als  
 e' riuscito la procedura da qualificazione da  
 ha superato la procedura di qualificazione di  
 ha fait un succès la procédure de qualificazion scc

#### Mediamatiker

Lehrberuf / Institution  
 Enterprise formatrice / institution  
 Azienda di trascrizio / istituzione  
 Manaschi d'impresa / instituzio  
 Urner Kantonalbank  
 6460 Altdorf

Ort und Datum  
 Lieu et date  
 Luogo e data  
 Lieu e data  
 Altdorf, 24.08.2013

Kantonal Behörde  
 Autorità cantonale  
 Autorità cantonale  
 Autorità cantonale



#### Fähigkeitszeugnis

Certificat de capacité  
 Attestato di capacità  
 Attestat da qualificazion

Name  
 Nom  
 Cognome  
 Num  
 Becker

Vorname  
 Prénom  
 Nome  
 Prenom  
 Maximilian

geboren am  
 Date de naissance  
 nato/a il  
 Data de nasc.

Bildungs- und Kulturdepartement  
 Dienststellen Berufs- und Weiterbildung

Rector  
 Leiter

Christof Springi

Lukas Schaffner

Deutschland