



Dennis ACKERMANN

German/Swiss

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SUMMARY

MSc Computer Science graduate specializing in data analysis and visualization focusing on Data Science and Geographic Information Systems (GIS). Applied advanced techniques in data analysis to interpret spatial patterns, trends, and relationships. Successfully utilized GIS tools to process and manipulate spatial data, contributing to informed decision-making processes. Developed and implemented effective data visualization strategies to present complex geographical information.

EDUCATION

UNIVERSITY OF KONSTANZ

2021-2023

MASTER OF SCIENCE IN COMPUTER AND INFORMATION SCIENCE

SPECIALIZATION: DATA SCIENCE

THESIS: AGENT-BASED ANALYSIS OF PUBLIC TRANSPORT INFRASTRUCTURE

UNIVERSITY OF KONSTANZ

2016-2021

BACHELOR OF SCIENCE IN INFORMATION ENGINEERING

THESIS: SPATIOTEMPORAL CHANGES IN FLIGHT ROUTE DISTRIBUTIONS

SCHLOSS GAIENHOFEN

2007-2015

ABITUR

EXPERIENCE

WORKING STUDENT AT STEINBEIS

04/2022-12/2022

ANOMALY DETECTION APPLICATION IN PREPARATION FOR SIEMENS LOGISTICS/KÖRBER SUPPLY CHAIN SOLUTIONS

GRADUATE STUDENT ASSISTANT AT THE UNIVERSITY OF KONSTANZ

07/2021-03/2022

WORKING ON A VGISCIENCE PROJECT: *UNCERTAINTY-AWARE ENRICHMENT OF ANIMAL MOVEMENT TRAJECTORIES*

UNDERGRADUATE STUDENT ASSISTANT AT THE UNIVERSITY OF KONSTANZ

04/2021-07/2021

GRADING *MULTIMEDIA RETRIEVAL* ASSIGNMENTS

SKILLS

PROGRAMMING LANGUAGES

Experienced: JavaScript/TypeScript | Python **Familiar:** Java

SOFTWARE DEVELOPMENT

Git | Docker

FRAMEWORKS & LIBRARIES

Angular | d3.js | Leaflet | Mapbox | FastAPI | Flask | React | pandas | scikit-learn | SciPy

DATABASE SYSTEMS

SQL | PostgreSQL | PostGIS | NoSQL

LANGUAGES

- **German:** mother tongue
- **English:** fluent both written and spoken



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RELEVANT PROJECTS

AGENT-BASED ANALYSIS OF PUBLIC TRANSPORT INFRASTRUCTURE

10/2022-11/2023

MASTER PROJECT AND THESIS IMPLEMENTING A DATA-DRIVEN VISUAL ANALYTICS SYSTEM TO ANALYZE THE CURRENT STATE OF THE PUBLIC TRANSPORT INFRASTRUCTURE IN KONSTANZ

TECHNOLOGIES: ANGULAR, PYTHON, POSTGRESQL, POSTGIS, FASTAPI, LEAFLET, D3.JS, DOCKER

ANOMALY DETECTION APPLICATION

04/2022-12/2022

REWRITING BACKEND ARCHITECTURE AND DATA VISUALIZATION FOR A TIME SERIES ANOMALY DETECTION SYSTEM

TECHNOLOGIES: ANGULAR, PYTHON, POSTGRESQL, FASTAPI, D3.JS, ELASTICSEARCH, DOCKER

VISUAL ANALYTICS SYSTEM TO IDENTIFY PATTERNS OF LIFE

04/2022-07/2022

IMPLEMENTING A SOLUTION FOR THE VAST CHALLENGE TO ANALYZE THE PATTERNS OF LIFE IN A CITY

TECHNOLOGIES: REACT, PYTHON, POSTGRESQL, POSTGIS, FLASK, NEO4J, D3.JS, DOCKER

UNCERTAINTY-AWARE ENRICHMENT OF ANIMAL MOVEMENT TRAJECTORIES (BIRDTRACE)

07/2021-03/2022

INCORPORATING MULTIPLE DATA SOURCES TO VISUALLY ENHANCE AND ENRICH BIRD TRAJECTORY DATA

TECHNOLOGIES: JAVASCRIPT, PYTHON, MAPBOX, D3.JS, DOCKER

SEMANTIC ZOOM - LINKING A 2D VISUALIZATION WITH AR

10/2021-02/2022

IMPLEMENTATION OF A SYSTEM THAT USES AUGMENTED REALITY TO INTERACT WITH A 2D MAP

TECHNOLOGIES: PYTHON, TYPESCRIPT, FLASK, MAPBOX, UNITY, POSTGRESQL, POSTGIS, D3.JS, DOCKER

SPATIOTEMPORAL CHANGES IN FLIGHT ROUTE DISTRIBUTIONS

08/2020-06/2021

BACHELOR PROJECT AND THESIS IMPLEMENTING A VISUAL EXPLORATION SYSTEM TO DETECT CHANGES IN FLIGHT ROUTES USING A NOVEL CLUSTERING ALGORITHM FOR TRAJECTORIES

TECHNOLOGIES: JAVASCRIPT, PYTHON, POSTGRESQL, POSTGIS, FLASK, MAPBOX, MATLAB, D3.JS, DOCKER

ANALYZING IMPACT OF WEATHER ON AIRCRAFT ARRIVALS

12/2019-02/2020

IMPLEMENTING A VISUAL EXPLORATION SYSTEM THAT HIGHLIGHTS FLIGHT TRAJECTORIES BASED ON WEATHER CONDITIONS

TECHNOLOGIES: ANGULAR, PYTHON, POSTGRESQL, POSTGIS, FLASK, MAPBOX, D3.JS, DOCKER