





Hsien-Pang, Hsieh(Roger)

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M.Sc., Business Analytics and Econometrics, Universität zu Köln
2023-2025(1.5 so far)
B.E., Engineering and Management Technische Hochschule Ingolstadt
2019-2023 (1.9)

SKILLS

- [Python](#) / R / SQL
- [Data Analytics](#), [A/B Testing](#)
- Google Cloud Platform (BigQuery, Looker, Looker Studio)
- [Tableau](#), Power BI, Excel

Thesis on Anomaly-based Intruder Detection, Universität zu Köln, Cologne Onsite April 2025 - October 2025

Mouse Dynamics / Isolation Forest / Autoencoder / Python

- Developed an anomaly-based intrusion detection system using unsupervised learning on mouse movement data.
- Engineered kinematic features and applied Isolation Forest and Autoencoder models for user-specific anomaly detection.
- Evaluated model performance on public Balabit datasets to validate detection accuracy.

Business Analytics Working Student, Dormakaba Deutschland, Ennepetal Remote June 2024 - May 2025

Power BI / Excel / ServiceNow / ERP Systems

- Designed and maintained scalable Power BI dashboards to monitor management-level KPIs, cutting reporting effort from 0.4 FTE to 0.1 FTE.
- Built custom reports for incident and SLA tracking to enhance operational transparency.
- Collaborated with service managers to identify bottlenecks and drive data-informed process improvements.

[Data Science Capstone Project](#), Metro AG, Düsseldorf Remote April 2024 - July 2024

[EDA](#) / [Random Forest](#) / [XGBoost](#) / [LSTM](#) / [Python](#) / [Bigquery](#)

- Predicted customer purchase behavior for METRO's CRM team using machine learning models.
- Conducted extensive EDA on sales data from METRO France, incorporating product, customer, and environmental features.
- Collaborated with a cross-functional team to refine forecasting models for monthly campaign optimization.

Thesis on Time Series Analysis, Almotion Bavaria, Ingolstadt Onsite March 2023 - August 2023

Time Series Forecasting / LSTM / Python / Scikit-learn / Keras

- Forecasted Bavarian traffic volume using loop detector data and advanced time series techniques.
- Applied stationarity tests, seasonal decomposition, and LSTM models to capture long-term traffic trends.
- Built forecasting models with Python to enable high-resolution prediction for traffic planning use cases.

Software Testing Working Student, Check24, Munich Onsite Jun 2022 - Nov 2022

Jira/ MongoDB/ Manual Testing

- Conducted manual frontend and backend testing for the Digital Advisor app within the insurance center
- Executed and documented test cases for mobile apps and web applications to ensure functional stability across user journeys.
- Queried and validated test data using MongoDB; supported database manipulation for scenario-based QA testing via Studio 3T.

SIDE PROJECTS AND HOBBIES

[Sales and Customer Dashboard](#) - An interactive dashboard to help a sales team to keep track of their KPI

[Photography](#) - 2020 Sony World Photography Awards - Youth Photographer of the Year