## Manuel Pasieka

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#### **Profile**

Builder, entrepreneur, and AI consultant with extensive experience in leveraging artificial intelligence to enhance business processes, drive innovation, and reduce operational costs. Skilled in developing AI solutions from concept to implementation, with a focus on cutting-edge technologies and methodologies.

## Skills & Tools

#### Development

· System Architecture, Python, C, Matlab, R

#### ML & Data Science

PyTorch, Tensorflow, Data visualization, NLP, Topic Modelling, LLM fine-tuning, prompt engineering, RAG, Vector Databases, GNN

#### Infrastructure

AWS, Azure, Docker, Terraform, GitOps, MLFlow, AWS SageMaker, OpenTelemetry, PostgreSQL, redis, AWS Redshift, pyspark, celery, airflow

# **Professional Experience**

### Kapsch TrafficCom AG - Al Consultant

May 2024 - Present

- Spearheading AI initiatives to optimize business processes using large language models (LLMs).
- Identifying innovative AI use cases to enhance operational efficiency.
- · Conducting vendor evaluations and gap analysis.

Tools: RAG, NLP, Requirement Analysis, Stakeholder Management

## CANCOM Austria AG - Al Solution Architect

May 2024 - Present

- Leading the development of an AI agent platform based on Retrieval Augmented Generation (RAG) for knowledge management.
- Designing scalable data processing pipelines and platform enhancements to meet customer-specific needs.
- Utilizing Azure Al Search and Azure OpenAl to enable efficient data storage and large-scale inference.

Tools: Python, Azure, RAG, NLP, Azure AI, Microservices, CI/CD

#### Pallas - Founder

June 2023 - May 2024

- Established a Knowledge Management System leveraging RAG for secure, scalable document Q&A.
- Integrated multiple knowledge bases for improved data retrieval and management.
- Implemented advanced search capabilities using open-source large language models.

Tools: Python, RAG, NLP, Vector Database, LLM Fine-tuning, OTEL, Microservices, CI/CD, Product Development, Sales

## Motius GmbH - Tech Lead & Data Engineer

April 2022 – April 2024

- Led the development of a spare part observability platform for Siemens, enhancing supply chain transparency.
- Architected a reliable cloud-based system for data processing and storage.
- Developed a multi-tenant solution with optimized performance for database access.

Tools: Python, pandas, Azure, Celery

## CARIAD - Tech Lead & Data Engineer

April 2022 – June 2023

- Developed a voice analytics platform to extract insights from customer interactions for improved business decision-making.
- Designed and maintained a comprehensive data pipeline for voice data processing and analysis.
- Created a Tableau dashboard for analysts to visualize customer sentiment and trends.

Tools: Python, NLP, Topic Modelling, Tableau, AWS Redshift,

#### Brantner Digital Solutions GmbH - Al Architect

May 2022

Prototyped enhancements for machine learning training pipelines, focusing on dataset and model performance tracking.

Tools: Python, MLFlow, Data Lineage

#### mySugr GmbH - Al Consultant

March 2023 - June 2023

- Conducted training on large language model concepts for employees.
- · Workshops on identifying and selecting internal LLM use cases and prototypes.

Tools: Teaching, Workshop creation

### MOSTLY.AI - Senior Machine Learning Engineer

June 2020 - April 2022

- Developed and improved synthetic data generation technologies, ensuring high-quality data privacy.
- Provided technical guidance for customer PoCs and developed training materials for ML applications.

Tools: Python, Tensorflow, PyTorch, NLP, PoC management

#### Craftworks GmbH - Data Scientist

January 2020 - April 2020

Delivered data-driven solutions across various industries, focusing on customer-specific requirements.

Tools: Python, Pytorch, Tensorflow, Pyspark

#### Vienna Biocenter Core Facilities - Scientific Software Engineer

June 2012 - October 2019

Created data analysis software for neuroscience, enabling automated behavior quantification and neural activity analysis.

Tools: Python, Matlab, R, Data Analysis & Visualization

#### Automative Research Institute of the University of Valencia - Research Assistant

September 2011 - October 2012

· Developing a virtual simulation environment controlled by a stationary replica of an autonomous vehicle.

Tools: Python

#### Adaptivia GmbH - Embedded System engineer

June 2007 - September 2009

Development of 16-bit low power SoC embedded systems for wireless underground sensor networks.

Tools: C

## **Entrepreneurship**

#### Pasieka Al Solutions GmbH - CEO

April 2024 - Present

Provides strategic Al consultancy and bespoke software solutions to help businesses leverage Al effectively.

## Austrian Artificial Intelligence Podcast - Founder & Host

April 2021 - Present

Hosts discussions with AI experts, exploring innovative methods and use cases in the Austrian AI landscape.

## Education

- Master in Artificial Intelligence, Universidad International de La Rioja, Spain, 2018-2019
- Master in Parallel and Distributed Computing, Universidad Politécnica de Valencia, Spain, 2010-2012
- Bachelor's in Computer Science, Technical University of Vienna, Austria, 2005-2009

### Certifications

AWS Certified Cloud Practitioner

#### **Publications**

- Pliota, P., Böhm, V., Grössl, F., Griessner, J., Valenti, O., Kraitsy, K., Kaczanowska, J., Pasieka, M., Lendl, T., Deussing, J. M. and Haubensak, W. (2018) 'Stress peptides sensitize fear circuitry to promote passive coping', *MolecularPsychiatry*.
- Dr. Johannes Griessner , Manuel Pasieka , Mr. Vincent Boehm , Mr. Florian Grössl , Mrs. Joanna Kaczanowska , Dr. Pinelopi Pliota , Mr. Dominic Kargl, Ms. Barbara Werner , Dr. Nadia Kaouane , Ms. Sandra Strobelt , Dr. Silke Kreitz , Prof. Andreas Hess and Haubensak, W. (2018) 'Central amygdala circuit dynamics underlying the benzodiazepine anxiolytic effect', MolecularPsychiatry.