# Johannes Kilian Langer

# Software Developer

# **SUMMARY**

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Munich

Strong theoretical background in applied mathematics, statistics and machine learning. Extensive knowledge in software development with 10+ years of programming experience and as data scientist & scrum master with 4+ years of work experience. Focused on improving the management of real world processes with software solutions, from digitalisation to human decision making.

**EXPERIENCE** 

# Software Developer

#### Freelancer

- Digitalisation of the operational planning of hospice volunteers.
- Implementation of a full stack web app (MERN) with interactive map and database.
- User login system based on modern data security and privacy standards.
- Deployment on the local cluster with remote admin access and backup system.
- Project management done with Azure DevOps.
- Extensive contact and short feedback cycles with the client.
- Reference: Robert Milbradt<sup>d</sup>; Codebase: Javascript, node.JS, React

#### Data Scientist & Scrum Master

01/2018 - 03/2022

03/2022 - 10/2022

Munich

#### Munich

#### Hawa Dawa GmbH

- Development of data processing & analysis pipelines using machine learning.
- Design and implementation of automatised alarm and issue-management systems.
- Development of applications for device monitoring and life cycle management.
- Scrum Master in an international & agile software development team.
- Automatisation of generation and delivery of product-grade air quality reports.
- Continuous deployment with Kubernetes on Microsoft Azure.
- Customer and partner facing presentations especially for topics of high complexity.
- Active as supervisor, recruiter and networker.
- Reference: Matthew Fullerton<sup>d</sup>; Codebase: R, Typescript, Python, YAML

### Student Consultant

10/2017 - 05/2018

Munich

### Glanos GmbH

- Optimisation of a text filtering business case with natural language processing.
- Extension of regular expressions using deep learning models.
- Reference: Prof. Helmut Küchenhoff<sup>©</sup>; Codebase: Python

# Research Intern

04/2017 - 10/2017

Edmonton, Canada

# University of Alberta

- Behaviour prediction of fMRI data using deep learning models (mixed CNNs & LSTMs).
- Reference: Prof. Russell Greiner<sup>d</sup>; Codebase: Python

## M.Sc. in Statistics

Ludwig-Maximilians-University Munich

10/2014 - 05/2018 **⇒ 1.25** 

Munich

Master Thesis: Band Matrices in Recurrent Neural Networks for Long Memory Tasks

- Extension and integration of C/CUDA kernels into the F# framework DeepML.Net
- Implementation and benchmarking of RNNs on high-performance computing cluster
- Grade 1.0; Reference: Prof. Bernd Bischler; Publicationer; Codebase: C++, F#, Python

# B.Sc. in Physics

Ludwig-Maximilians-University Munich

10/2010 - 10/2013

**⇒ 1.71** Munich

Bachelor Thesis: Prebiotic Polymerization of 3',5'-Cyclic Guanosine Monophosphate Grade 1.3; Reference: Prof. Dieter Braun<sup>d</sup>; Publication<sup>d</sup>

### **Abitur**

Illertal-Gymnasium Vöhringen

09/2000 - 06/2009

# **TECH SKILLS**

# **Programming Languages**

Proficient: R Python Type/JavaScript

• Intermediate: C/C++ F# Java YAML

### **Software Development**

Web Apps: Express React Node.Js

Tools: Git Azure DevOps APIs

Practice: Style Testing Documentation

#### 

Cluster: Docker Kubernetes CI/CD

Database: SQL PostgreSQL MongoDB

Office suites: MS Office iWork

Clouds: Azure Heroku

#### **Data Science**

• Statistics: LM GLM GP EM PCA

• ML: deep learning RF SVM PGM

Data: time series spatial NLP sales

Visualisation: shiny plotly leaflet

Frameworks: tensorlflow pytorch mlr

## **SOFT SKILLS**

Teamwork: Mentor Tutor

Leadership: Scrum Master Supervisor

• Interpersonal skills: Mediator Recruiter

Time management: Project manager

Communication: Networker

# **LANGUAGES**

Native proficiency: German

Full professional proficiency: English

Basic proficiency: Spanish

# **FURTHER ACHIEVEMENTS**



End of life companion volunteer for the Christophorus Hospiz Verein e.V.



MITx Micromasters Certificate in Data, **Economics and Development Policy** 



Ambassador Academy - Development, Climate and Population of the FAW Ulm



Award for best master thesis at the LMU Munich Department of Statistics



Research grant for the University of Alberta Research Experience (UARE)



2<sup>nd</sup> in Soccer 2vs2 at the RoboCup Junior World Championship