



## ISAAC RILEY

Machine Learning Engineer



15.06.1993



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## PROFILE

Deep expertise in Python, machine learning, and Nix, complemented by proficiency in a wide array of other languages and tools. Committed to clean, maintainable software design emphasizing scalability, clarity, and robustness. Firm believer in the power of static type-checking (mypy), data models and validation (pydantic), thorough testing (pytest), and pre-commit hooks (lefthook).

## SOCIALS

@yelircaasi



## SKILLS

Python	<div></div>
Nix/NixOS	<div></div>
Git	<div></div>
Bash	<div></div>
PyTorch	<div></div>
TensorFlow	<div></div>
Julia	<div></div>
HTML+CSS	<div></div>
TypeScript	<div></div>
Haskell	<div></div>
Rust	<div></div>

## LANGUAGES

English	★★★★★
German	★★★★★
Russian	★★★★★
French	★★★★★
Ukrainian	★★★★★
Spanish	★★★★★

## EXPERIENCE

### RESEARCH ENGINEER

knecon Technologie GmbH

October 2021 - present

📍 Mannheim, Germany

Helped develop an LLM-based document analysis platform with retrieval-augmented generation and integration of external data sources.

Used AzureML, MLFlow, Gitlab CI/CD and Kubernetes for development and deployment of machine learning pipelines.

Designed, trained, and deployed the NLU-/NER-based interface for an integrated desktop search tool.

Developed a face redaction service using dlib, C++, and Python.

Created and maintained numerous utility packages and infrastructural tools for internal use.

### DATA SCIENCE INTERN

Backpackertail

October 2020 - March 2021

📍 Heidelberg, Germany

Developed a reverse image search system for travel recommendations, built with TensorFlow.

Developed an automatic route-planning tool built with ORTools.

### RESEARCH ASSISTANT

Brigham Young University Economics Department

July 2015 - May 2019

📍 Provo, UT, USA

Implemented an XGBoost-driven system for entity matching across historical records for historical economics research. Created a pipeline for cleaning and entity recognition of patent records.

Created a pipeline for cleaning and entity recognition of patent records.

Published two peer-reviewed academic articles as a co-author.

## EDUCATION

M.Sc. Computational Linguistics University of Stuttgart 2021

B.S. Economics Brigham Young University, Provo, UT, USA 2018

High School Diploma James Bowie HS, Austin TX, USA 2011

## OPEN-SOURCE PROJECTS

🔗 nbcats - cat command for Jupyter notebooks, written in Go

🔗 datethyme - ergonomic datetime types built on Pydantic, emphasizing parsing and arithmetic

🔗 apiarium - Python toolkit for API + interfaces: 'write once, run anywhere' app as CLI, TUI, REPL, and via the Matrix protocol

## INTERESTS



Linux



NixOS



Python



PyTorch



TensorFlow



Julia



Go



Haskell



Rust



Hiking



NixOS



Python