# Mgr. Jan Kislinger

**Data Scientist | Mathematician | Python Developer**
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### Experience

`[2024/04 - present]` **Data Science Manager; Sky**
I manage a team of four direct reports. My team develops models for personalized sports recommendations for Peacock and related services. We have also created a Flask application to help with model introspection and to visualize user behavior patterns. We use Python libraries like TensorFlow and Polars for these tasks. The models are deployed into Vertex AI on Google Cloud.

`[2023/06 - 2024/03]` **Data Scientist; Sky**
I localized and deployed recommendation models into joined-venture platforms (Showmax, Sky Showtime). I used BigQuery for data collection and feature engineering, and TensorFlow with Vertex AI for model training.

`[2020/05 - 2023/05]` **Data Scientist; Showmax**
I was a tech lead for content personalization in a squad of data scientists and backend developers. I designed and co-authored the end-to-end pipeline for a recommendation engine that ran in Airflow. The scope of the pipeline was from collection of raw events sent by client devices to generated recommendations stored in Redis. I also built a Flask application to introspect models and visualize data and user features used by the model. Our codebase was primarily in Python, mostly using libraries such as Pandas, Polars, Scikit-learn and TensorFlow.

`[2018/07 - 2020/04]` **Data Science Lead; Oddin.gg**
I managed a team of three direct reports. We built machine learning models for real-time predictions in e-sports. The scope was from offline data collection (image recognition from video streams, logs from game engine) to a service providing real-time odds. The service was a gRPC server in a docker container that provided predictions (probabilities) for significant game events. The code was written in Python using mostly Pandas and TensorFlow.

`[2016/06 - 2018/06]` **Data Scientist; RTSmunity**
I built statistical models for real-time predictions in e-sports. The production code was in base R and analyses with Tidyverse libraries. I also wrote some evaluation algorithms in C++ using Rcpp package.

### Education

`[2024/02 - present]` Informatics (PhD); Czech Technical University. Research area: Applications of Multi-Layered Clustering in Recommender Systems.
My research focuses on clustering items to create recommendations that are meaningfully structured. One example of this is the recommendation pages often seen on streaming platforms. These pages display rows (carousels) of items that share a common feature, such as a movie genre, which serves as the row label. I study algorithms for generating these types of recommendations and methods for evaluating their effectiveness. I have written some parts of my algorithm in Rust for better performance. In addition to using common Python-based data science tools, I have also implemented parts of my recommendation engine in Rust to scale data processing more efficiently.

`[2014/09 - 2017/01]` Probability, Statistics and Optimization (MA); Charles University. Thesis: Fare price optimization (Markov decision process).

`[2011/09 - 2014/09]` Financial Mathematics (BA); Charles University. Thesis: Fractional Levy Processes.

### Programming skills

`Python`: data processing, visualization, *Polars*, *Numpy*, *Sklearn*, *TensorFlow*, *Flask*
`Rust` : writing custom *full page recommender* for my research
`R` - data analysis, visualization, statistical modelling, package development; packages *purrr*, *ggplot2*, *dplyr*, ...
`SQL` - basic scripting (postgres, BigQuery)