

Date: 14<sup>th</sup> July 2023

## Reference Letter

Dmitry Zorikhin has been employed by Emirates Steel Arkan since 25/01/2022, and is currently serving as a full-time staff member based in the Abu Dhabi office, United Arab Emirates. As per his employment agreement, he works for a duration of 40 hours per week.

Dmitry currently serves as a Lead Data Scientist and has consistently demonstrated his expertise as a top-tier professional with a relevant background in data science and IT. He possesses exceptional skills in machine learning and advanced analytics. During this period, his responsibilities encompassed the following tasks:

- Initiating, developing, deploying, evaluating and monitoring machine learning models
- Utilizing advanced statistical methods to analyze collected data, identify trends and patterns, and provide decision-making support
- Applying data mining/data analysis methods using a variety of data processing frameworks
- Leading and managing data science team
- Driving adoption with relevant stakeholders, share data insights in the form of presentations, descriptive dashboards and web-based applications

Dmitry actively participates in multiple productivity improvement initiatives focusing on data science, automation of data extraction, and optimization. I would like to highlight some specific projects in particular:

- Value-In-Use model: re-established training pipelines for 25 models used in prediction of different manufacturing parameters; implemented optimisation algorithm with non-linear constraints; developed web-based application using streamlit; used python and xgboost, scipy, numpy libraries to develop the solution; drive adoption through initiating trial and involving cross-functional teams.
- %Metallisation and %C use case: led development team from initiation to deployment stage; applied linear and non-linear regression models as well as gradient boosting algorithms; used chemical and physical process parameters to incorporate material balance equations into physics-informed machine learning model; used Databricks as ML development platform.
- HSM Gap Optimisation use case: applied advanced statistical methods to historical data in order to provide optimised rolling mill equipment gaps thus reducing waste coefficient.
- Solid Flow Prediction: managed delivery of advanced analytics solution using Databricks for model development and deployment, ibaHD Server and Azure Data Factory for data ingestion, transformation and scoring.

Dmitry has been actively involved in leading, managing and coaching a technically capable team of data scientists.



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