

Success Story Templates

Name Gjorgji Madzarov (NCC North
Macedonia)

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E-mail contact@hpc.mk

Industrial HPC Course



SUCCESS STORY IN DIGITAL MARKETING

COMPANY INTERTEC

Bul. Kliment Ohridski 16, Skopje, North Macedonia
Frankenthaler Straße 20, 81539, Munich, Germany
Bulevardi Dëshmorët e Kombit 60/4-1, Pristina, Kosovo
<https://www.intertec.io/>

THE PROBLEM

Automated latency bounded voucher creation

SUCCESS STORY DETAILS

HPC provider: FCSE/UKIM
Domain Expert: Gjorgji Madzarov
Country:North Macedonia
Link:
<https://www.hpc.mk/index.php/2022/02/03/automated-voucher-generation/>

THE HPC PROBLEM DOMAIN

Natural language processing (NLP),
GPU processing optimization
Elastic resources allocation

THE SOLUTION

Pre-training and fine tuning of models for automated text generation and paraphrasing.
Decoupling and scaling of the execution environment.

THE BENEFITS

Reduced complexity
Improved performance
Handling high loads

SUCCESS STORY IN INDUSTRIAL DOMAIN DIGITAL MARKETING

THE PROBLEM

Automated latency bounded voucher creation out of a large pool of crawled content data using recent advancements in NLP for automated text generation and paraphrasing

THE HPC PROBLEM DOMAIN

Natural language processing (NLP),
GPU processing optimization
Elastic resources allocation

THE SOLUTION

The solution includes pre-training and fine tuning of different models for automated text generation and paraphrasing for each individual field in the voucher.
The execution environment was decoupled from the business process and horizontally scalable (including GPU support).
Using of an onnx runtime instead of a native execution runtime
Decrease of the float number representation precision.

THE BENEFITS

The model's time execution complexity was reduced
The model's predictive performance for vouchers generation was improved
The proposed models and the suggested model serving architecture for voucher generation is appropriate for real-time on-demand generation on high loads.