Koussaila **KADI**

Software Engineer | Data Engineer Consultant

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Paris, France

I am currently a consultant Software Engineer with 3 years of experience. I am looking for permanent position in the Paris area.

Experiences

Today – Nov. 2022 — Software Engineer Consultant, MCA-FRAMATOME, France

- Developed REST APIs and backends using Golang, following strict security regulations.
- Worked on microservices architecture with Docker, orchestrated services, and containerized applications.
- Implemented RabbitMQ for asynchronous communication and used GORM with PostgreSQL for database management.
- Managed Linux-based systems including KVM virtualization and network protocols (TCP/IP, HTTP).
- Conducted network administration tasks and security hardening, focusing on maintaining secure communication channels.
- Collaborated on the development of monitoring software for EPR2 and power plant security systems (Hinckley Point C, UK).
- Enhanced knowledge on I&C systems (PS, RCSL, DEL, SA I&C) and control command systems.
- Actively participated in technical documentation and tool familiarization.

Golang | Docker | Microservices | RabbitMQ | GORM | PostgreSQL | KVM | Linux | TCP/IP | HTTP | Bash | PyQt | Jira

oct. 2022 – Sept. 2021 — Apprentice software and Data Engineer, IFP New Energy, France

- State of the art of Deep learning models for production in high performance system with C++.
- Data features creation, processing & visualization.
- Technical support for deployment of Deep learning models.
- Conducting a benchmarking study to assess the performance of TensorFlow, PyTorch, and ONNX for inference using C++.
- Integrating deep learning models into a large simulation software using the C++ APIs of TensorFlow, PyTorch, and ONNX with distributed computing in cluster CPUs and GPUs.
- Devops (CI/CD) with Jenkins and Git
- **Submission of a scientific article** to the International Symposium on Computer Architecture and High-Performance Computing (SBAC-PAD).

Slurm | C++(11/14/17) | CMAKE | Python | Tensorflow | Pytorch | ONNX | PySpark | MPI | OpenMP | STL | Linux | Bash scripting

Feb. 2022 – Nov. 2021 — PFE Deep Learning Engineer, Safran aircraft Engines, France

The goal of the project is to automate the task of detection and characterization of cracks on a part of high pressure distribution DHP in an aircraft engine CFM-56 to facilitate maintenance and increase the life of these parts.

- Image classification with CNN with accuracy : 98% .
- Feature extraction VGG16, DenseNet201
- Image Segmentation Mask-RCNN, U-Net with accuracy : 98.6%
- Image processing and computer vision
- Software development and Dashboard.

Python | Pytorch | Tensorflow | OpenCV | UML | OOP | HTML | CSS | JavaScript

Aug. 2021 – Mai 2021 — Internship software developer, EDF - nuclear plant , Belleville-sur-Loire, France

- Realization of a functional specification.
- Study of the existing tool, and agile method
- Software architecture, modeling, and implementation.

Python | Flask | Design patterns | UML | HTML | JavaScript | CSS | MySQL | OOP

Education

2020 - 2022 **Master Engineering of intelligent systems**, CFA des sciences, Sorbonne university, Paris, France.
2017 - 2020 **Bachelor's degree in Electronics**, Sorbonne university, Paris, France.

IT Skills

Programming	**Python** , C/C++, Java , HTML, JavaScript, CSS, Scala
Frameworks	Pytorch, Tensorflow, Keras, Scikit-learn, PySpark, Numpy, Pandas, Matplotlib, Qt.
Database	SQLite, MySQL, PostgreSQL.
Cloud Computing	Azure fundamentals, Databricks.
OS, Version control	Windows , Linux, Git
Deep Learning Arch.	CNN, GAN, KNN, RNN, LSTM, SVM, PCA, Mask-RCNN, U-NET, Transformers, Reinforcement Learning, Bayesian networks
Modeling	UML, Design Patterns, MCD
C++/HPC	CMAKE, MPI, STL, Boost, OpenMP, CUDA, Tensorflow, Torch, Onnx Runtime.

Projects

Image segmentation with deep learning Dec. 2021 - Jan. 2021

See in GitHub
use of the Mask-RCNN architecture to segment images containing cracks.

Python | Tensorflow 2 | Mask-RNN | Transfer Learning

Convert speech to text with end-to-end CNN-LSTM model - NLP Nov. 2021 - Jan. 2021

See in GitHub
use of deep learning model to convert speech (audio signal) into text.

Python | CNN | LSTM | CTC | Mel spectrogram | Keras | Tensorflow

Emotion recognition from speech - NLP Dec. 2021 - Jan. 2021

See in GitHub
automatic detection of the emotions of a person from his voice with deep learning.

Python | Tensorflow 2 | CNN | Resnet | BERT | SVN

References

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