

Baptiste Moreau-Pernet

Data Scientist ▪ Learning Engineer

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ACADEMIC EXPERIENCE

Research Assistant

CMU | Fall 2020

- Extracted valuable insights from a SQL database storing chatbot conversational metadata to refine interaction design using Numpy, in a research project to train low-resourced Ivoirian teachers.
- Created data visualizations to soon deploy the chatbot for 500 teachers.

Educational Goals, Instruction & Assessment Project

CMU | Fall 2020

- Designed a 10-hour course for 2nd graders for algebraic thinking, following backward design methodology.
- Elaborated an evaluation research module for course improvement.

Personalized Online Learning Project

CMU | Fall 2020

- Designed an adaptive educational course in Geography for college students using Cognitive Task Analysis, improved it with A/B testing.
- Implemented the course in a digital cognitive tutor in Javascript (nools)

Capstone Project

CentraleSupélec | 2017 to 2019

- Co-designed a skill-based job description ontology to match job offers to job seekers' de-identified resumes in a 2-year, 4-person project.
- Predicted job turnover with Machine Learning classification models using Python, sklearn and pandas, which resulted in a 0.98 accuracy.

Innovation Project

CentraleSupélec | Spring 2019

- Co-designed a neural network-driven autonomous car using Raspberry Pi 3 and Arduino in a 2-person semester-long project.
- Developed a convolutional Neural Network model with TensorFlow to drive the car using floor pictures, which achieved a 0.91 accuracy.

PROFESSIONAL EXPERIENCE

Data Scientist Intern at Calyps S.A, Sion, Switzerland

March 2020 to July 2020

- Designed and implemented a patients' hospital stay software to improve codification efficiency and save time for clinical professional coders.
- Trained a BERT Deep Learning classifier on 30K+ natural language medical notes with 400+ target classes, using state-of-the-art Natural Language Processing on PyTorch, and achieved a 60% accuracy.
- Ran the software's operational implementation for a private clinic.

Research Intern at Cognitive Science & Psycholinguistics Lab, ULM, Paris

September 2019 to January 2020

- Developed a R statistical matching model to identify grade repetition's effects, and ran the study on a 30K+ Junior High School student cohort.
- Concluded on the negative average effect of grade repetition on learning.

Developer Intern at Moneythor, Singapore

July 2015 and august 2016

- Coded a Java app to extract PDF banking transactions using Tabula.
- Coded several Javascript REST APIs to provide valuable banking advice for customers based on their transaction history.

EDUCATION

Carnegie Mellon University School of Computer Science

Master of Educational
Technology & Applied
Learning Science
2021

CentraleSupélec

Master of Science & Engineering
2020

CentraleSupélec

Bachelor of Science &
Engineering
2018

SKILLS | Data Science

Languages

Python, JavaScript, SQL, R

Algorithms

Deep Learning, Natural
Language Processing

Libraries

Pandas, Numpy, seaborn,
Keras, PyTorch, TensorFlow

SKILLS | Learning Engineer

Course design

cognitive task analysis, A/B
testing, backward design

Online learning

cognitive tutors

HONORS

Rotary International Global Grant Scholarship

Rotary's Development Axe of
Education

CMU | 2020 to 2021

OTHER INTERESTS

Multicultural experiences

Competitive rowing

Black belt in Karate

Ski at a competitive level

Guitar player