Neil FARMER

Artificial Intelligence and Software Development engineer

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Driving licence | French nationality | Date of birth : 2 August 1999

WORK EXPERIENCE

August 2022 to Dec 2022 — **CHANEL, Pantin (93), fixed-term contract**
- Clinical research mission in artificial intelligence (make-up transfer on faces) using GAN (Generative Adversarial Networks)

Python | image processing | signal processing

February 2022 to July 2022 — **FORVIA (FAURECIA Clean Mobility) (Bavans), engineer school final-year internship**

At the hydrogen tank technologies R&D center :
- Development in Python and Halcon of artificial intelligence models for defect detection based on supervised learning approaches, as part of the development of an assembly line optimization system. The project combines computer vision and artificial intelligence for the visual inspection of produced parts, with the objective to automate defect detection.
- Image processing : automatic recentering of a camera on a robotic arm focused on a produced part to detect defects on its inner surfaces.

C++ | Python | image processing

July 2021 to August 2021 — **CERN (Geneva), CERN Online Summer Student Programme 2021**
- Migration project Python 2 to Python 3, tutored by a software engineer from the Fermilab in Chicago

Python | Shell

September 2020 to February 2021 — **THALES LAND AND AIR SYSTEMS (Limours), engineer school second-year internship**
- In the Radar Embedded Processing Department, development in Python to create a VHDL library, an XML file to drive the registers, C code for the DSP (Digital Signal Processing) team & a documentation in Word regarding the registers in the VHDL library

Python | Shell

April 2019 to July 2019 — **EDF nuclear power plant (Civaux), internship in Data Science and Business Intelligence**
- Development of macros in VBA to record data to help the Nuclear Safety Engineers in the process of verifications as part of their safety analyses

June 2018 to July 2018 — **ARMATIS-LC (Boulogne-Billancourt) Junior data analyst (fixed-term contract)**
- Design of recruitment dashboards (VBA) & presentation of the summary to the management

EDUCATION

2022 **UTBM engineering school in computer science**, Technology University of Belfort-Montbéliard
Specializations : [1] Artificial intelligence, [2] Software and knowledge engineering
2019 **Data Science & statistics** University Diploma of Technology (DUT) - University of Caen Normandy
2017 **Baccalaureat in Economics**, Mathematics option, graduated with honors (mention assez bien)

SKILLS

Languages	Python • C • C++ • C# • Java • JSON • XML • Bash • Shell • Matlab • SARL • Halcon
Artificial intelligence	Multi-agent systems • neural networks • linear regression • supervised and unsupervised learning • machine learning • Keras • TensorFlow • OpenCV • Cognex
Applied mathematics	Operational research • optimization • metaheuristics
Design languages	UML • SysML • OCL
Databases	SQL • PL/SQL • NoSQL • PostgreSQL • Oracle • Redis
Business Intelligence / Dataviz	R • SAS • Tableau Software • Power BI
Frameworks / Middleware	Qt • JavaFX • Spring • Spring Boot • Hibernate • Apache Tomcat
Other domains	Git • TCP/IP • HTML • PHP • Javascript • CSS • Catia • Revit • SOA architecture • DevOps

Certifications

- **Cisco CCNA Routing & Switching** :
  Routing and Switching Essentials; Introduction to Networks
- **Linguaskill** (score : 169)

Languages proficiency

English (B2) ●●●●○
German (A2) ●●●○○
Italian (A1) ●○○○○

Projects

2022 – 2021 | **Project at the UTBM in 2021-2022**

- Software development for the resolution of a problem of rotation of a fleet of vehicles with capacity constraints (CVRP, Capacitated Vehicle Routing Problem) using artificial intelligence techniques

Multiagent systems · Neural networks · Metaheuristics · Operational research · Combinatorial optimization

2021 – 2020 | **Projects at the UTBM in 2020-2021**

- Software audit (Yaoqiang BPMN Editor)
- Design of a school course catalog (Java EE)
- Design and creation of a software to apply the SCRUM methodology

Java EE · Scrum

2020 – 2019 | **Projects at the UTBM in 2019-2020**

- Interface to compare Fitts' law to the time required to reach a random target (Qt, C++)
- Process management with the round-robin algorithm with priority in C
- Graph and application in C++
- Tabu search in C and C++ to solve an assignment problem
- Image Gallery in Java
- Multimedia library to add tags to a user's content (C#)

Qt · JavaFX · C · C++ · Java · C#

2020 | **Personal work (Java)**

- Interface and algorithm for graph theory
  github.com/Neilstid/Graph-Java

Java

Personal interests

- Chess
- Table tennis
- Skiing
- Mountain bike
- Mountain walking