Sylvain ROUDIERE

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28 ans

Doctor-Engineer in Artificial Intelligence

Data science - Artificial Intelligence

WORK EXPERIENCE

10/2024 - Now

LR Technologies – Toulouse

Research and Development Engineer:

- Member of the R&D team on the Knowledge Management (KM) project to build a KM system to efficiently identify, store and retrieved consultants' knowledge to improve company's productivity and innovation.

10/2020 - 11/2023
3 years

ANITI – Université Fédérale Toulouse Midi-Pyrénées / ENAC / NXP-Semiconductors

Doctorat: Radar Interference Mitigation with V2X and AI

- Developed a Python-based traffic simulator equipped with radar-fitted vehicles and V2X communication means to minimize radar interference.
- Designed a metaheuristic (JAVA) to determine the optimal bandwidth allocation for a given scenario.
- Implemented Graph Neural Networks for radar line-of-sight prediction.
- Implemented a Reinforcement Learning framework into the simulator.
- Authored 4 research papers, three of which were presented at conferences (IEEE VTC-2023, IEEE ITSC 2021) and the ITS World Congress.
- Filed 3 patents (2 accepted; 1 pending).

04/2020 - 10/2020
6 months

NXP-Semiconductors – Toulouse

Final internship VALDOM (6 months): Radar Interference Mitigation with V2X and AI

- Implementation and analysis of basic strategies used in interference mitigation.
- Development and analysis of new artificial intelligence strategies.

2019
6 months

Sopra Steria – Grenoble

Final internship INP (6 months): Project LeMON: AMS for EDF infrastructure surveillance applications. (Angular - Agile Methodology - 15-member Team)

- Development of POC for the geolocation and visualization of sensors and their temporal data.
- Presentation of results to the client as part of pre-sales activities.
- Bug fixing, feature development, version control management within the AMS contract.z

SKILLS

Langages

Dévelopement:	R, Python, Typescript, Java, SQL, HTML, SCSS, Ada, C
Framework / IDE:	VSCode, PyCharm, IntelliJ IDEA, Angular, Android Studio
Bureautique:	Powerpoint, Excel, Word, Photoshop
Méthode agile:	Scrum
Other:	Git

Data Science

Virtualisation, Cloud:	AWS, OpenStack
Traitement de données:	NoSQL, Hadoop, Spark
Programmation pour architectures hétérogènes:	mPI, OpenMP
Intelligence artificielle:	Pytorch, Tensorflow

EDUCATION

2023

Université UT3 – PhD in artificial intelligence – ANITI / ENAC / NXP-Semicondutors – Toulouse

Subject: Radar Interference Mitigation with V2X and AI

Thesis supervisors: Daniel Delahaye ; Pierre Maréchal

Laboratory: ENAC

Business partner: NXP-Semiconductors

2019

INSA-ENSEEIHT – Specialized Master VALMDOM - Valorisation des données massives – Toulouse

Specialized Master's degree in the field of Big Data and Data Science.
- Machine Learning, Deep Learning, and optimization techniques
- Virtualization technologies and Cloud Computing
- Batch and stream data processing

2018

PHELMA-ENSIMAG – Master degree INP – Grenoble

Majors:
- Physics Electronics Telecommunications (PET)
- Embedded Systems and Connected Objects (SEOC)

Abroad Semester:
- Royal Institute of Technology (KTH) - Sweden (Machine Learning; Neural Networks; Data Mining)

LANGUAGES

French: Native

English: C2 - Bullats

Spanish: B2

Swedish: A1

Additional Information and hobbies

Driver's license

First Aid Training Certificate

Volunteering: Member of the Arts Bureau (BDA) at PHELMA. Organizing various cultural and artistic events

Music: Classical and contemporary piano, violin.

Sports: Tennis, hiking, and badminton.