ARTHUR FINDELAIR

DUAL MASTER'S DEGREE STUDENT SPECIALIZED IN MACHINE LEARNING

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EDUCATION

ILLINOIS INSTITUTE OF TECHNOLOGY (IIT) - CHICAGO, IL, USA   Expected August 2021
MASTER OF SCIENCE IN ELECTRICAL ENGINEERING (Current GPA: 4.0)
Relevant coursework: Machine & Deep Learning, Computer Vision and Image Processing, OOP & Machine Learning.

ISAE-ENSMA - POITIERS, FRANCE   Expected August 2021
DIPLÔME D'INGÉNIEUR IN AERONAUTICAL ENGINEERING
Equivalent to Master of Science | Specialized in avionics software and embedded systems.

LYCÉE KLEBER, CPGE, PSI*- STRASBOURG, FRANCE   September 2016 – June 2018
Intensive program in mathematics and physics in preparation for competitive entrance examinations to French engineering schools.

PROFESSIONAL EXPERIENCES

INTELLIGENT ROBOTICS LAB, UNIVERSITY OF BIRMINGHAM – UNITED KINGDOM   June - August 2020
MACHINE LEARNING RESEARCH INTERN
- Deployed a simulated environment to efficiently enhance the common-sense reasoning system (ASP) of an assistant robot.
- Built an application optimizing labeled image capture to extend hand signs dataset and enhance classification models.
- Developed a TensorFlow model on a self-made dataset to enforce human-robot communication through hand signs.

ENSMASTEEL, FRENCH ROBOTIC CUP   June 2019 - Mai 2020
TEAM LEADER
- Managed an 8-persons team and a 2,000€ budget to create an autonomous robot competing in the French Robotic Cup.
- Oversaw parallel evolutions of mechanical, electrical, and software sub-teams to ensure a smooth system integration.
- Implemented a robust finite-state robotic framework in C++ to guarantee precise navigation and multiple actuators control.

SELECTED PROJECTS

THISNIGHTSKYDOESNOTEXIST.COM
- Trained and fine-tuned a StyleGAN2 model on Google Colab using 4500 images scraped from Instagram.
- Deployed a website built on top of a 5000 generated images database using Firebase to showcase GANs' potential.

AN INTER-LOCATING NETWORK (TOP 10 OUT OF 250 TEAMS ON THE BLACK-OUT CHALLENGE BY SAFRAN)
- Designed and pitched an alternative to GNSS through dead-reckoning, BLE beacons, and an inter-locating network of users.
- Engineered a locating module through inertial measurements and real-time vehicle data achieving less than 1% drift error.

NEURAL-NETWORK LIBRARY ACCELERATOR
- Programmed a Python package integrating an optimized C++ back-end library to fasten CNN inference execution time.

SKILLS

Industry Knowledge: Machine Learning (DNN, CNN, GAN ...) • Computer Vision • Signal Processing • Microcontrollers • FPGAs

Programming Languages: Python (TensorFlow, Numpy, Pandas, PyTest, Scikit-Learn, PyQt) • C++ • Java • Ada • SQL

Tools: Linux • Version Control (Git) • Cloud Computing (Google Colab) • Visual Studio Code • PlatformIO

Soft Skills: Bilingual Communicator (English, French) • Initiative • Focus • Adaptability • Creativity & Innovation

ADDITIONAL EXPERIENCE

ISAE-ENSMA STUDENT COMMITTEE MEMBER   2019 - 2020
Collaborated on a 28-persons team to organize multiple school events, including Freshmen's weekend with a 40,000€ budget.

DRONE INSTRUCTOR AT ENSMAERO   2019 - 2020
Taught racing drone building process and flying fundamentals to half a dozen beginners.