


ARTHUR FINDELAIR

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DUAL MASTER'S DEGREE STUDENT SPECIALIZED IN MACHINE LEARNING

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 arthurfindelair.com

 github.com/arthurfdlr

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, OOP & Machine Learning, Computer Vision, AI & Edge Computing.

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

- Built an application optimizing labeled image capture to extend hand signs dataset and enhance classification models.
- Improve human-robot communication by developing a TensorFlow model on a self-made dataset of 11200 instances.
- Deployed a simulated environment to efficiently enhance the common-sense reasoning system (ASP) of an assistant robot.

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 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

- Accelerated CNN inference process by creating a Python package integrating an optimized C++ back-end library.

SKILLS

Industry Knowledge: Deep Learning (CNN, VAE, GAN) • Signal Processing • Computer Vision • Microprocessors • FPGA

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

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

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.