XIONG JUNLIN

xiongjunlin1992@gmail.com www.linkedin.com/in/xiongjunlin

Summary

- Skilled in Python-based machine learning and computer vision, with proficiency in PyTorch and OpenCV.
- Extensive experience in intelligent control for robotics, specializing in multi-sensor fusion, path planning, detection, and simulation.
- Solid foundation in quantum mechanics and quantum computing; independently designed and simulated quantum circuits using Qiskit.
- Certified PMP project management professional with substantial experience managing ICT projects.

Internship

• 2025.03-2025.08 The Institute of Photonic Sciences (ICFO) Spain A research internship at ICFO, where I will complete my master's thesis by optimizing time domain sampling in FTIR spectroscopy and developing machine learning models to predict gas concentrations from frequency-domain data.

Education

- 2023.09-2025.06 EIT Digital- Aalto University
 M.Sc. Autonomous Systems Robotics and Artificial Intelligence
- 2023.09-2025.06 EIT Digital- BME University Hungary

M.Sc. Autonomous Systems

2011.09-2015.07 Southwest Jiaotong University
 BEng. Measurement and Control Technology and Instruments

GPA of Master

4.6/5.0

Professional Experience

2020.07 – 2023.08 China mobile (Sh

China mobile (Shanghai) Industrial Research Institute

New Technology Engineer

Finland

China

- Research on Patent Invention in the Field of Aeronautical Based on 5G SatCom.
- Research on 5G Technology Applications for Cockpit and Cabin IoT Systems.

Certification

Software Product PDMA - New Product Development Professional Certification

Project Management Professional (PMI-PMP)®



Academic Paper

Real-time CAT prediction via cabin sensor and ground system Primary Author: Xiong Junlin

https://github.com/Xiong-Junlin/Real-time-CAT-prediction-via-cabin-sensor-and-ground-system

Developed a Clear Air Turbulence (CAT) early warning system using portable onboard devices
to collect real-time accelerometer data. Leveraged machine learning for ground-based analysis
to predict CAT, improving flight safety and comfort without extra hardware.

Research projects

Grover Algorithm with Qiskit on 2-Qubit System

2024.12 - 2025.01

https://github.com/Xiong-Junlin/Grover-Algorithm-Implementation

Implemented Grover's algorithm on a 2-qubit system using *Qiskit* to efficiently search for the target state |11>. *Simulated the circuit and visualized results*, achieving 100% accuracy in identifying the target state, demonstrating the algorithm's quadratic speedup.

Sanding Robot Optimization Using DDPG Algorithm

2024.9 - 2024.12

<u>https://github.com/Xiong-Junlin/Reinforcement-Learning-Project---Sanding-Task</u> Implemented a reinforcement learning solution *using the DDPG algorithm in PyTorch to* **optimize the behavior of a sanding robot**. Achieved improved performance in navigating complex environments while maximizing rewards.

Sensor Fusion of GPS and IMU Using Extended Kalman Filter

2024.9 - 2024.11

https://github.com/Xiong-Junlin/Sensor-Fusion

Utilized Python(Numpy) and the KITTI dataset to implement sensor fusion of GPS and IMU data through an Extended Kalman Filter. Accurately **simulated the vehicle's trajectory**, achieving improved localization and path estimation.

Path Planning Algorithms for Mobile Robots Using RRT

2024.5 - 2024.8

https://github.com/Xiong-Junlin/Path-Planning-Using-RRT-Algorithm

Developed collision-free navigation paths for autonomous robots in simulated environments using Webots. Implemented the RRT algorithm in Python to *find optimal paths for obstacle avoidance*.

Modeling, Simulation, and Control of Quadcopters

2024.9 - 2024.10

https://github.com/Xiong-Junlin/Modelling-Simulation-and-Control-of-a-Quadcopter

Studied advanced research papers on quadcopter control and utilized MATLAB to simulate laboratory environments, focusing on dynamic modeling, control algorithms, and system behavior analysis.



EIT Digital Master's Programme in

Autonomous Systems (AUS)

Letter of Acceptance

for

Junlin Xiong

Date of birth: 27 July 1992 EIT Digital student ID: 232352

The EIT Digital Master School is pleased to inform you that you have been accepted as a degree student to the EIT Digital Master's Programme in **Autonomous Systems (AUS)** starting autumn 2023. You have been accepted to the programme with the following study track:

Entry University: Budapest University of Technology and Economics Exit University: Aalto University—Robotics and Artificial Intelligence

Admission to the programme is under the condition that you present the final original Transcript of Records and Degree Certificate/Diploma upon enrolment at your entry and exit university. For specific matters regarding this condition, please contact your entry university. Contact details can be found here.

Prof. Salvatore Moccia Head of Master School EIT Digital Master School

The EIT Digital Master School is a cooperation between























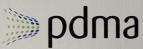








University of Twente, The Netherlands | Università di Bologna, Italy | University of Turku, Finland | University of Rennes 1, France | Universidad Politécnica de Madrid, Spain | University of Trento, Italy | Politecnico di Milano, Italy | Tallinn University of Technology, Estonia | KTH Royal Institute of Technology, Sweden | Eötvös Loránd University, Hungary | Université Côte d'Azur, France | Budapest University of Technology and Economics, Hungary | Babeș-Bolyai University, Romania | EURECOM, France | Aalto University, Finland



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The Product Development and Management Association

proudly grants

Xiong JunLin

the designation of

New Product Development Professional

for meeting the experience and knowledge requirements set forth by the PDMA Certification Committee.

Designees are subject to re-certification at three-year intervals.

Awarded on May 25, 2019

am Cember

Chair



Sudding Gulas
Vice President of Certification



THIS IS TO CERTIFY THAT

Junlin Xiong

HAS BEEN FORMALLY EVALUATED FOR DEMONSTRATED EXPERIENCE, KNOWLEDGE AND PERFORMANCE IN ACHIEVING AN ORGANIZATIONAL OBJECTIVE THROUGH DEFINING AND OVERSEEING PROJECTS AND RESOURCES AND IS HEREBY BESTOWED THE GLOBAL CREDENTIAL

Project Management Professional (PMP)[®]

IN TESTIMONY WHEREOF, WE HAVE SUBSCRIBED OUR SIGNATURES UNDER THE SEAL OF THE INSTITUTE

Junify Hurp



Pierre Le Manh | President & CEO

PMP® Number: 1965823

PMP® Original Grant Date: 10 September 2016

PMP® Expiration Date: 10 September 2025

