

Zhongke Sun

• Internship Availability: 07/2025 to 03/2026 • +33 0781188920 • zhongke.sun@student-cs.fr

EDUCATION

CentraleSupélec & ESSEC Business School

Master in Data Sciences & Business Analytics (Dual Degree) GPA: 14/20

Sep 2023 - Feb 2026

Paris | France

- Core courses: Machine Learning, Computer Vision, Optimization, Time Series, NLP, Data Structure & Algorithm, Database.

Northwest University

BSc in Applied Statistics, Department of Mathematics GPA: 85/100

Sep 2019 - Jun 2023

Xi'an | China

- Chinese prestigious university accredited in '211' list; Top 4% in National Competitive Entrance Exam (all subjects).
- The **National Second Prize** in China, the 2021 CUMCM (Contemporary Undergraduate Mathematical Contest in Modeling).
- The Annual Scholarship of Department Mathematics for outstanding studying in 2020 & 2021 & 2022.

PROJECT

Chinese Chess Game Agent – Implementation of AlphaZero Algorithm

CentraleSupélec Reinforcement Learning 2025

Mar 2024 - Mar 2024

Paris | France

- Developed a Chinese chess game agent using a ResNet-based policy-value network combined with Monte Carlo Tree Search.
- Simplified self-play and learning progress using modular and piece-wise learning ideas.

Use Hand Gesture Recognition Algorithm & CNN-LSTM to Play Chrome Dinosaur Game

CentraleSupélec Computer Vision Project 2025

Feb 2023 - Mar 2025

Paris | France

- Designed and compared two hand gesture recognition pipelines for controlling the Chrome Dinosaur Game: a traditional vision rule-based system using HSV segmentation, contour detection, and motion tracking; and a deep-learning approach using CNN-LSTM for temporal gesture classification.

Climate Q&A – AI Chatbot Developed on LLMs

Ekimetrics Hackathon 2024

May 2024 - May 2024

Paris | France

- Developed a LangChain-based parser to process ESG PDFs into structured Parquet datasets for LLMs model fine-tuning.
- Implemented a generative Q&A Chatbot pipeline using embeddings, FAISS, llama, Groq, and Gradio, enabling real-time ESG document querying with source attribution and carbon footprint estimation.

EXPERIENCE

ESSEC Business School

Research Assistant

Jun 2024 - Jan 2025

Paris | France

- Researched an NLP project to investigate the fund's strategy. Preprocessed Text data and solved insufficient dataset problems using mixed GenAI approaches. (*Supervised by Sofia RAMOS, Department Finance*)
- Studied the behavior of a function defined under given conditions and demonstrated the possibility of multiple roots within the specified dynamic interval using Python numerical simulation. (*Supervised by Anastasios DOSIS, Department Economics*)

Shenwan Hongyuan Securities

Investment Banking Off-Cycle Intern (ECM, Generalist Team-Shanghai)

Apr 2023 - Jul 2023

Shanghai | China

- Assisted in a ¥150M equity financing project by conducting corporate financial analysis, industry investigation, due diligence, transaction-level walkthrough testing, and more necessary steps.

EY

Data Analytics Winter Intern (Assurance, EY Shanghai Branch)

Jan 2023 - Feb 2023

Shanghai | China

- Cleansed and standardized large volumes of audit data using SQL, Alteryx and Excel in RDP servers for data integrity check and data pivot; Tracked bad debt data and corrected irregular and inconsistent records.

CITIC Securities

Summer Intern (Structured Products Sales Assistant, CITIC Wealth Management Division)

Jul 2022 - Aug 2022

Xi'an | China

- Analyzed the 'snowballs' structured products, an exotic barrier option, and their derivatives based on different underlying assets.

MISCELLANEOUS

- **Language abilities:** English (C2), Chinese (Native Speaker), French (B1).
- **Computer skills:** Python, Git, SQL, CLI, Docker, R, C++, APIs, Bloomberg, MATLAB, Microsoft Office, VBA.
- **Certificates:** Bloomberg Market Concepts Certificate. Akuna Capital Options 101, Options 201.
- **Club:** Beta Sigma Quant Finance Club; Alpin Ski; ESSEC Basketball Club, Northwest University Men's Basketball Athlete.