# Chanattan Sok

École normale supérieure de Rennes, 11 avenue Robert Schuman, 35170, Bruz, France chanattan.sok@ens-rennes.fr | chanattan.github.io | Born on the 6<sup>th</sup> of August 2002

I am a second year master student in AI, MAS, and decision at Sorbonne University, and at the same time a fourth-year student at École normale supérieure de Rennes. I seek for a PhD position in decision/recsys/CS-economics.

### Education

Master's degree in Algorithms, Artificial Intelligence, Interactions and Decision (AI2D) - Sorbonne University, Paris, France

Coursework on decision (multi-criteria; in uncertainty), coordination and game theory in MAS, decision-making models, MARL, social choice, mechanism design and auction theory.

ENS Diploma in Computer Science - École normale supérieure de Rennes, France

Aug 2022 - Aug 2026

B.Sc. in Fundamentals of Computer Science - ENS Rennes, France

### **Research Positions**

Research assistant at LIP6 (MAS team) | Sorbonne University, Paris, France. Sept 2025 - February 2025 Supervised by Nicolas Maudet, and Arianna Novaro. Report

 $Research\ project\ in\ parallel\ to\ my\ M2\ studies\ on\ CS-economics:\ in\ progress.$ 

keywords: task allocation, game theory

Student researcher at Anticor (Datalab) | Paris, France.

Work with Julien Perez, and Anticor lawyers.

Decision-making help with multi-agent LLMs on case studies: agents focus on law-specific reviewing on a user-given case to study, the final agent aggregates and synthesizes a decision. **keywords:** LLM, deliberation

Research assistant at LAMSADE and CES | Paris Dauphine-PSL, CNRS, France. Supervised by Jérôme Lang, Arianna Novaro, and Florian Sikora.

Measuring fairness in railway networks with graph theory and social choice. Modelled a few EU countries railway network and proposed fairness indices for evaluation. **keywords:** social choice, graph theory

Research fellow at City Science Lab HCU Hamburg, an MIT Media Lab collaboration and IRD in France | Hamburg, Germany.

Supervised by Arnaud Grignard and Rico Herzog.

Modelled an urban digital twin of Hamburg city, focused on buildings CO2 footprints for policy decision-making help, in GAMA. Collaboration with the ministry of Housing and Ecology. **keywords:** MAS, simulation, urban digital twin

Research assistant in the Multi-Robot Systems team | Inria & INSA Lyon, France. Supervised by Olivier Simonin.

Simulation and resolution of spatial conflicts between pedestrians based on social choice and game theory. Developed a simulation platform for pedestrians' motion in Python and Mesa. **keywords:** MAS, simulation, game theory, social choice, planning

Research assistant in *Programming Languages* | Aarhus University, Denmark. Supervised by Magnus Madsen.

Extension of the functional-first Flix language with Java interoperability, in Scala. Proposed Java types' representations and their reduction in type resolving. **keywords:** programming language design

Aug 2025 - 202X

Aug 2022 - Aug 2023

May 2025 - August 2025 Website, GitHub, Report

> Feb 2025 - May 2025 Slides, Report

Sept 2024 - Dec 2024 Paper

May 2024 - Aug 2024 GitHub

Research assistant in the <i>Data Management team</i> , IRISA   Thales, ENS Rennes, France. Supervised by Laurent d'Orazio.	Sept 2023 – May 2024 Paper
Proposed a study platform in Rust for performance and time comparisons of Rust-native and Wasm-based join standalone operations in serverless/serverful environments. keywords: Webassembly, Rust	
Student research fellow in data management/AI   Anticor, ENS Rennes, France. Work with Julien Perez, and Anticor lawyers.	Nov 2023 – May 2024 Press Paper
Created law-related database scheme to help lawyers find public market frauds. keywords: mySQL, pandas, UX	
Research assistant in the <i>Multi-Agent Systems team</i>   Sorbonne University, LIP6, France. Supervised by Nicolas Maudet and Aurélie Beynier.	May 2022 – July 2023 GitLab, Report
Developed a generic n-choice deliberation simulation platform where agents negotiate, influence and vote with modelled and ranked preferences – based on Putnam's two-level game theory. <b>keywords:</b> MAS, simulation, deliberation, preferences, game theory	
Teaching	
• Referring tutor and founder of the computer science and maths tutoring for bachelor students, ISTIC - Univ. Rennes, France	Sept 2023 - March 2024
• Guest lecturer on negotiating multi-agent systems, invited by Pr. Franz Kurfess - Calpoly University, San Luis Obispo, California.	Jan 2024
• CPES (Cycle Pluridisciplinaire d'Enseignement Supérieur) science tutor in maths and computer science for first year bachelor students - Lycée Châteaubriand, Rennes	Sept 2023 - March 2024
• High-school tutor in maths and computer science - Rennes	Sept 2023 - March 2024
• Assistant professor in mathematics and physics for middle-school students - Collège Évariste Galois, Paris.	Sept 2021 - March 2022
• Private teacher in computer science for students of all ages - Independent.	2015 - 2024
Additional Experiences and Activities	
Co-president of the oenology club, ENS Rennes	Sept 2023 - March 2024
Founder of Tutorat ISTIC, tutoring program for B.Sc. students, Univ. Rennes	Sept 2023 - March 2024
Finalist in ENS Rennes eloquence competition 2023-2024, ENS Rennes	2023
Winner of a local hackathon (Palm'Hackathon ISTIC 2023), Univ. Rennes	2023
Treasurer of RJMI Rennes 2023 - ENS Rennes	Oct 2022 - March 2023
Participant of the NEGOCLIM project for Economics & CS research, MITI - CNRS	2022 - 202X
Freelance developer - Java Swing/FX, and Python software development, Online	2015 - 2019

## Languages

French (native), English (proficient), German (notions)