Chuan Li

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Education

Sorbonne University & LIPADE, Université Paris Cité — Paris, France
Ph.D. Candidate in Computer Science; Teaching Associate (C/C++/Java) — *Oct. 2022 – Sept. 2025*

Thesis: *Proactive Mobility, Naming and Caching in Next-Generation Mobile Services.*

Full doctoral scholarship awarded by Sorbonne University.

Teaching Associate at Polytech Sorbonne (Algo C, Algo Java, Computer Architecture and Embedded Systems, Tools for Computer Science)

Doctorant conseil en innovation (project 4EU+, Renault Group): Strategic Road Noise & Energy Efficiency Challenge (Jan – Jul 2025).Acted as PhD consulting lead in the 4EU+ Strategic Road Noise & Energy Efficiency Challenge, co-developing a scalable, sensor-agnostic Road-Traffic Noise Model (RTNM) for city-scale deployment. Led model refactoring, validation (RMSE = 3.8 dB(A), $\rho = 0.83$), and policy diagnostics, enabling real-time impact evaluation of speed-limit reforms. The results directly supported strategic recommendations adopted by Renault, earning formal recognition from the project committee. Prof. Valérie Patrin-Leclère and Herve Marc commended the methodological innovation and practical relevance of the delivered solution.

Heidelberg University — Heidelberg, Germany
Visiting Scholar, 4EU+ — *Mar – Oct 2025*

Joint Research in Spatiotemporal Modelling & Infectious-Disease Prediction.
Predicted viral-transmission risk in real-world social networks using STGNNs combined with Physics-Informed NNs.

Massachusetts Institute of Technology — Cambridge, USA
MicroMaster's Degree in Statistics and Data Science — *Sept 2021 – Oct 2022*

Sorbonne University – Polytech Sorbonne — Paris, France
M.Eng. in Electrical & Computer Science (GPA 17.83/20, Rank 2/48) — *Sept 2018 – Jul 2021*

University of Poitiers — Poitiers, France
B.Sc. (Year 2) in Electrical & Computer Engineering (GPA 13.88/20, Rank 8/120) — *Sept 2016 – Jul 2018*

Research Experience

LIPADE, Université Paris Cité & Institut Polytechnique de Paris — Paris/Palaiseau, France
Ph.D. Researcher – Deep Learning (GNN) for Human Mobility & Geospatial Optimisation — *Oct 2022 – Present*

Fusion of spatial data, network optimisation and energy-efficient transport planning.

Teaching Associate at ENSTA Paris (Algo C [IN101 course link]) and ESIEE Paris (Deep Reinforcement Learning).

Telecom SudParis, Institut Polytechnique de Paris — Palaiseau, France
Research Engineer – Spatio-Temporal Data Analysis — *May – Oct 2022*

Designed grid frameworks and applied ML techniques to map mobile-phone data.

Industry Experience

CAMEL-AI.org — London, England, United Kingdom
Technical Illustrator & Communication Ambassadeur (Part-time, Remote) — *Nov 2024 – Present*

Designed clear, visually engaging technical illustrations and diagrams to support CAMEL-AI's educational resources, including research papers, blog posts, and social media content.

Collaborated with AI researchers and developers to translate complex concepts into accessible visual narratives for a broad audience, enhancing public understanding of cutting-edge AI.

Led outreach initiatives to promote responsible and inclusive AI development through CAMEL-AI's communication channels, increasing engagement across academic and general audiences.

Supported branding and content strategy by aligning visual identity with CAMEL-AI's mission to democratize access to AI research and ethics.

Group Renault, Alliance Engineering Dept. (DEA-TDV) Guyancourt, France
Research Engineer *Sept 2018 – Aug 2021*

Optimised ADAS reliability using Python and ML-driven data analysis, reducing testing time via scenario prioritisation.

Built VBA/Python dashboards to monitor real-time vehicle performance (e.g., sensor accuracy).

TASFAIM (start-up) Cergy, France
Co-Founder & CTO (Part-time, Remote) *Oct 2021 – May 2022*

Applied geospatial analytics to identify high-demand areas and guide scalable infrastructure deployment.

Schneider Electric L'Isle-d'Espagnac, France
Engineering Intern *Apr – Jul 2018*

Designed fingerprint-authentication module for industrial control terminals.

Leadership & Awards

ACM SIGSPATIAL GIS Cup 2024 – 1st Place Atlanta, USA

EV charging-station placement optimisation balancing accessibility, efficiency and sustainability.

Datathon Sécurité Ferroviaire 2025 – 3rd Place Paris, France

Predictive risk-assessment model to identify high-risk rail segments and prioritise maintenance.

MIT HackMed GrandHack 2025 – Assistive Tech Track Cambridge, USA

Co-developed *GLOOP*, an AI-powered diabetes-management system integrating CV and RAG.

Mistral AI Hackathon (-Gaming Edition) 2025 Paris, France

Built *Sarah's Chronicles*, an AI-generated interactive storytelling platform.

Hi! Paris Hackathon 2024 – Technical Excellence (4th) Paris, France

Predicted groundwater levels during summer using multimodal data.

Mistral AI × Alan Hackathon 2024 – 4th Place (Accuracy) Paris, France

Developed *Milan*, a multimodal AI healthcare assistant with personalised guidance.

Key Consulting & Research Projects

Hybrid AI-driven modelling: road-interaction GNNs & physics-informed PINNs.

Geospatial data structuring: QGIS road characteristics, traffic, 3D infrastructure for noise & aerodynamics.

Integrated Navier–Stokes and acoustic-wave equations into PINN models to optimise vehicle–road interactions.

Provided policy recommendations on road-surface materials, speed regulations & infrastructure upgrades.

Outlined large-scale deployment strategy for Renault patented noise-assessment solutions.

Selected Publications

Li, C., Zhao, S., Gauthier, V., & Moungla, H. "Large-Scale Optimisation of Electric-Vehicle Charging Infrastructure." *Proc. ACM SIGSPATIAL 2024.* (Oral Presentation & Best Paper Award, accepted).

Li, C., Gauthier, V., Nunez del Prado Cortez, M., Alatrista-Salas, H., & Moungla, H. "Assessing the Usefulness of Digital Contact Tracing Using Real-World Contact Data" *Nature Human Behaviour* (under review).

Li, C., Gauthier, V., Nunez del Prado Cortez, M., Alatrista-Salas, H., & Moungla, H. "On the utility of Digital Contact Tracing on empirical contact network." *Netmob 2025* (under review).

Li, C., Gauthier, V., Nunez del Prado Cortez, M., Alatrista-Salas, H., & Moungla, H. "TDLG at Scale: Modeling Co-Location Events from Large-Scale Human Mobility Data" *Netmob 2025* (under review).

Li, C., Gauthier, V., Nunez del Prado Cortez, M., Alatrista-Salas, H., & Moungla, H. "Nation-Scale Risk Mapping from Human Mobility Data Using Time-Decayed Line Graphs" *AAAI 2025* (on going).

Li, C., Yang, R. "An Applied ML Pipeline for Geospatial Groundwater-Level Classification Supporting Early Warning & Resource Planning." *ICML 2025 NewInML* (accepted).

Yang, R., Li, C. "Machine Learning-Assisted Semi-Automatic Connection Recovery of 3D Tubular Structure Skeletons via Component-Wise MST and Filtered Delaunay Triangulation " *ICCV 2025 Vision-Language Modeling in 3D Medical Imaging (VLM3D) Workshops* (under review).

Yang, R., Li, C. " Semi-Automatic Connection Recovery of 3D Tubular Structure Skeletons via Component-Wise MST and Filtered Delaunay Triangulation. " *IEEE International Conference on Bioinformatics and Biomedicine* (under review).

Li, C., Yang, R., Gauthier, V., & Moungla, H. " Fusing Multi-Agent Systems for Real-Time Groundwater Early Warning" *AAAI 2025* (on going).

Li, C., Zhao, S., Gauthier, V., & Moungla, H. "DOVA-PATBM: An Intelligent, Adaptive, & Scalable Framework for Optimising Large-Scale EV-Charging Infrastructure." *ACM SIGSPATIAL 2025* (under review).

Li, C., You, J., Gauthier, V., Nunez del Prado Cortez, M., Alatrista-Salas, H., & Moungla, H. "Enhancing Spatio-Temporal Forecasting with Spatial Neighbourhood Fusion: A Case Study on COVID-19 Mobility in Peru." *IEEE GLOBECOM 2025* (under review).

Hu, Z., Li, C., Naima, M., & Gauthier, V. "Distribution Shift for Spatio-Temporal Networks." *AAAI 2025* (On going).

Hu, Z., Li, C., Gauthier, V., & Moungla, H. "Fine-Grained Urban-Grid Clustering of Mobile-Phone Metadata with Deep Spatio-Temporal Clustering." *IEEE IJCNN 2025* (accepted).

Hu, Z., Li, C., Gauthier, V., Nunez del Prado Cortez, M., & Moungla, H. "Spatio-Temporal Analysis of Mobile Service Consumption for Social-Signature Clustering." *NetMob 2023* (accepted).

Technical Skills & Interests

Programming: Python, C/C++, Java, R, Scala, SQL, MATLAB, JavaScript, PHP, VHDL, VBA.

ML & Data: PyTorch, TensorFlow, Spark, GNNs, RL, Geospatial Science, Data Fusion.

Tools: QGIS, CARLA, SCANeR, VISIM, LaTeX, Git, Office; Cloud (IoT), MQTT, RTOS.

Languages: Chinese (native), French (fluent), English (TOEIC 855), Japanese (basic).

Interests: Ultra-trail running, marathon, swimming, cycling, photography.