

Luojie(Roger) Wang

☎ (646) 737-3493 | ✉ lw3240@columbia.edu | 🌐 RogerWang | 🌐 RogerWang | 🌐 RogerWang

EDUCATION

Columbia University MS in Computer Science

New York, NY
Dec 2026

Relevant Coursework: Machine Learning, NLP, Algorithms, Applied Deep Learning, Interface Design

McMaster University

BEng in Mechatronics Engineering Co-op, GPA:10.8/12.0

SHamilton, ON
May 2022

Academics: [3.9/4.0]. Recipient of Dean's List Scholarship (2017-2022)

WORK EXPERIENCE

NVIDIA Corporation

Santa Clara, CA

Incoming Software Engineer Intern, Simulation and Virtualization

May 2026 - Aug 2026

- Joining the Simulation and Virtualization team to contribute to GPU virtualization and pre-silicon simulation tooling used to model and validate next-generation NVIDIA hardware and software stacks
- Will develop and automate simulation, testing, and validation workflows in C++/Python to support cross-component verification across GPU virtualization platforms

General Motors Canada, Virtualization Platform & Automation

Markham, ON

Software Developer - Co-simulation & Cloud Infrastructure

Jul 2024 - Jul 2025

- Built and optimized CI/CD pipelines using Jenkins, GitHub Actions, and JFrog Artifactory to automate build, packaging, and release of virtual ECU artifacts, integrating unit and system-level regression testing to improve release efficiency by ~20%
- Developed and automated co-simulation workflows using VEOS, VDK, AUTOVAL, and virtual ECU platforms to orchestrate signal-level simulation, validation, and system-level testing across distributed components

General Motors Canada - CTC TRACK Program

Markham, ON

Controls and Software Developer

Jul 2022 - Jul 2024

- Built observability dashboards in Grafana using Azure Data Explorer (ADX), KQL, and Prometheus metrics, collaborating with cross-functional teams to monitor 50+ backend microservices and track real-time performance and reliability (SLIs/SLOs/SLAs)
- Built a Golang microservice on Microsoft Azure implementing ETL pipelines with Databricks and Grafana, improving system observability and enabling engineers to perform root cause analysis on performance and reliability issues at scale
- Profiled ECU software performance with QNX Momentics and TraceLogger to identify scheduling, memory, and runtime optimization opportunities for embedded modules
- Redesigned diagnostics middleware in C++, applying SOLID principles and modular architecture on Linux-based development environments while following the Agile software development cycle, reducing CPU overhead by ~15%
- Developed a Python-based diagnostics automation framework using PyTest and Pandas to automate On-Board Diagnostics (OBD) operation evaluations, reducing manual effort by ~30% and improving result consistency

ADDITIONAL EXPERIENCE

McMaster University

Markham, ON

Teaching Assistant – Operating Systems (SFWRENG 3SH3)

Jan 2022 - May 2022

- Led labs and office hours for C/C++ and operating systems, guiding students through debugging and structured problem-solving

General Motors Canada

Markham, ON

Embedded Control Design Co-op – Brake Diagnostics

Sep 2020 - Aug 2021

- Developed brake diagnostics algorithms in MATLAB/Simulink, executed SIL/MIL simulations for model verification

PROJECTS & EXTRACURRICULAR

Research Project – Robocall, Phishing, and Fraud Detection

New York, NY

Advisor: Prof. Henning Schulzrinne, Columbia University

Dec 2025 - Present

- Designed a multi-signal scam-call detector fusing TF-IDF intent classification, Whisper ASR, and acoustic features (pitch/jitter/MFCCs) with STIR/SHAKEN attestation and carrier-signer reputation lookups across NPI/FCC directories
- Shipped the full-stack pipeline as a containerized FastAPI + Asterisk SIP + Twilio PSTN service backed by PostgreSQL, with a rule-based decision layer (caller × signer × attestation) and a live SSE browser dashboard streaming per-stage scoring traces

SKILLS

Languages: C, C++, Python, Golang, Java, JavaScript, HTML, CSS, SQL, Bash, PowerShell, Groovy, JSON, XML

Frameworks: Spring Boot, Flask, TensorFlow, PyTorch, Bootstrap, jQuery, Junit, Databricks, AUTOVAL

Developer Tools: Git, Docker, Jenkins, Gradle, Maven, Linux/Unix, GDB, Valgrind, PostgreSQL, GCP, Grafana, MATLAB, Jira