

CHENYAN LIU

☎ (+65) 8771 3061 ✉ chenyan@u.nus.edu 🏠 Homepage 🌐 GitHub

PROFILE

PhD researcher at NUS focused on coding AI — LLM-based code edit recommendation and developer flow modeling. Published at OOPSLA, ASE, ISSTA, FSE, and NeurIPS; research deployed in production at ByteDance Trae.

EDUCATION

National University of Singapore (NUS)

Ph.D. in Computer Science

Aug. 2023 - Jun. 2027 (Expected)

Master of Computing, GPA: 4.42/5.0

Aug. 2021 - Mar. 2023

Huazhong University of Science & Technology (HUST)

B.Eng. in Computer Science and Technology, GPA: 3.91/4.0

Sep. 2017 - Jun. 2021

INTERNSHIP

ByteDance Trae

Feb. 2025 – Oct. 2025

Large Language Model Algorithm Intern

- Integrated LSP capabilities (rename, go-to-definition, find-references) from the research prototype (ASE 2025) into Trae Cue's production pipeline.
- Proposed the mental-flow concept for modeling developer coding behavior and completed the EditFlow paper (OOPSLA 2026) during the internship.
- Implemented the core algorithm for consolidating fragmented edit logs into coherent, low-noise edit sequences and collected TB-scale code editing trace data at ByteDance, directly enabling Trae Cue Pro to land the mental-flow idea in production.

SELECTED PUBLICATIONS

- [1] Liu J, Lin Y, **Liu C**, Qian Y, Liu Y, Chang J, Zhang W, Huang L, et al. IssueExec: A Test-Driven Approach for Localizing Software Engineering Issues. *ISSTA 2026*.
- [2] **Liu C**, Lin Y, Chang J, et al. EditFlow: Benchmarking and Optimizing Code Edit Recommendation Systems via Reconstruction of Developer Flows. *OOPSLA 2026*.
- [3] **Liu C**, Lin Y, Huang Y, et al. Learning Project-wise Subsequent Code Edits via Interleaving Neural-based Induction and Tool-based Deduction. *ASE 2025*.
- [4] **Liu C**, Cai Y, Lin Y, Huang Y, et al. CoEdPilot: Recommending Code Edits with Learned Prior Edit Relevance, Project-wise Awareness, and Interactive Nature. *ISSTA 2024*.
- [5] Cai Y, Lin Y, **Liu C**, Wu J, et al. On-the-Fly Adapting Code Summarization on Trainable Cost-Effective Language Models. *NeurIPS 2023*.

SELECTED AWARDS

- Dec. 2025 & Aug. 2024, Research Achievement Award, NUS (awarded twice).
- Nov. 2024, Second prize (ranked 3_{rd} out of 74) in Prototype System Competition for Software Research Achievements, ChinaSoft 2024, China Computer Federation (CCF).

PATENTS

China Invention Patents: CN121070316A (Enriched edit representation), CN121029146A (TRACE framework), CN119088381A (CoEdPilot framework).

SKILLS

Languages Python, C/C++
Code Analysis LSP, Tree-sitter

Frameworks PyTorch, HuggingFace, SFT
Tools Git, Docker, GitHub API