

LARRY ZHANG

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EDUCATION

Carnegie Mellon University

B.S. in Computer Science, Additional Major in Linguistics

- Cumulative QPA: 3.48, Dean's List F24, S25

Pittsburgh, PA

August 2023 – May 2027

Relevant Coursework: Data Structures and Algorithms, Distributed Systems, Machine Learning, Computer Systems, Phonetics, Phonology, Syntax, Semantics, Intonation, Grammar Formalisms

SKILLS

Programming Languages: Python, C/C++, Java, SML, HTML/CSS/JS

Natural Languages: English (native), Mandarin (~HSK 4), Japanese (~JLPT N3)

EXPERIENCE

Teaching Assistant / Grader

Fall 2025 – Present

Pittsburgh, PA

Carnegie Mellon University; 80-180 Introduction to Linguistics

- Staffed a 100-level linguistics course covering phonetics, phonology, morphology, syntax, pragmatics, etc.
- Supported the instructor with course logistics, and proofread and graded problem sets and exams.
- Gave consistent and constructive feedback to 100+ students by creating rubrics and holding office hours.

Laboratory Phonology Research

Spring 2025

Carnegie Mellon University

Pittsburgh, PA

- Designed/piloted an experimental study on fricative voicing, participating as both researcher and subject.
- Performed bulk segmentation and acoustic analysis in Praat, measuring VOT and other phonetic cues.
- Produced technical writeups documenting methodology and segmentation procedures.

HCI Design Competition

Spring 2025

Carnegie Mellon University

Pittsburgh, PA

- Worked with team to design input system to quickly manipulate on-screen objects under strict constraints.
- Iteratively prototyped and refined the user interface to best manage the speed-accuracy tradeoff.
- Won 1st place in a hackathon-like competition out of 24 teams based on speed and accuracy metrics, and delivered a video presentation documenting the development and testing process.

PROJECTS

Concatenative Speech Synthesizer | [GitHub] | Python, SQLite, MFA

Winter 2025 – Present

- Applied linguistic theory to build a tool prompting user voice recordings to create a custom text-to-speech.
- Automated segmentation of phonemes and storing their relevant phonetic features into a unit database.
- Augmented the base tool with a prosody prediction module and signal processing techniques for fluency.

Word Hunt Game | [itch.io] [GitHub] | Godot Engine, GDScript

Summer 2025

- Developed cross-platform Boggle-style game with new features dedicated to improving user performance.
- Built 1.2k LoC codebase from scratch, and designed an inheritance hierarchy with minimal coupling.
- Synthesized abstractions from a diverse set of programming domains in a software development context.

Malloc Lab – Dynamic Memory Allocator | C, gdb, Git

15-213 Computer Systems (Spring 2024)

- Implemented C malloc() and its variants and free() with explicit, implicit, and segregated free list policies.
- Optimized throughput and utilization, with the goal of minimizing external and internal fragmentation, using strategies such as bit encoding, memory alignment, block splitting, boundary-tag coalescing, and more.
- Ensured program correctness by inspecting heap contents using gdb and implementing a heap checker.
- Provided thorough C documentation and maintained version control in Git/GitHub.