Zicheng Liang

GitHub ↗ | My Portfolio ↗ | LinkedIn ↗
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EXPERIENCE

RESEARCH ASSISTANT | Trinity College Dublin
Feb 2025 - Apr 2025 | Prof. James Ng, School of Statistics
- Analyzed a LLM-based diabetes health tracker chatbot's performance by writing manual test cases
- Identified key issues such as hallucination and UI/UX drawbacks for research report inclusion

SELECTED PROJECTS

BEAT BOT ↗ | Agentic workflow developer & DevOps
Jan 2025 - Apr 2025 | Mentored by IBM engineers
- Architected an AI music composition workflow by synthesizing 10 research papers + music theory
- Implemented the agentic workflow using LangGraph, leveraging parallelization and map-reduce patterns to optimize performance, cutting generation time by 50%.
- Streamlined application delivery through Docker containerization.
- Managed deployments across AWS-ECR/ECS (initial phase) and Vercel+Railway (subsequent iteration), gained 20 users until now.
- Followed agile development pattern, reporting progress and integrating architectural and research insights from weekly client (IBM mentor) meetings.

GITLET ↗ | A cli tool implementing Git's basic features
Jul 2024 – Aug 2024 | UC Berkeley CS61B - Data Structure & Algorithm
- Built a version control tool with 13 Git-style commands, including add, commit, checkout, and merge.
- Applying Data Structures including List, Trees, Maps, Graphs; Algorithms including Tree's Lowest Common Ancestor.
- Implemented Java File I/O, serialization, and SHA-1 hashing for secure data management.

EXTRACURRICULUM

GOOGLE CODE RETREAT | Google Dublin Office
25th Apr 2025 | Google Ireland
- Rebuilt Conway's Game of Life in 6 iterations with fast-changing requirements
- Applied Test Driven Development into 4 iterations
- Pair-programmed with 3 partners, including a Google engineer

IRL-CPC | University College Cork
1st Mar 2025 | UCC ACM Student Chapter

Ranked 9th among 70 teams in Ireland's Collegiate Programming Contest

HACKIRELAND | Dogpatch Lab
27-28th Mar 2025 | HackIreland

Developed a spoken-English companion for non-native speakers with OpenAI's Realtime audio API

EDUCATION

TRINITY COLLEGE DUBLIN
Bachelor of Computer Science
Sept 2023 - Jul 2027 | Dublin, Ireland
Grade: I (avg. 85/100)
Computer Science Society (member)

SKILLS

PROGRAMMING
Python, C/C++, Java

WEB DEV
Javascript/Typescript, CSS, HTML
Next.js, React, Flask, PostgreSQL

AI/ML
LangGraph/LangSmith
Tensorflow

DEVOPS
Nix, Docker
AWS, Google Cloud Platform

OS & TOOLS
Linux (NixOS)
Git/GitHub/GitLab

LANGUAGE
English: Professional
Chinese: Native
Italian: Beginner

COURSEWORK

COLLEGE COURSE

Algorithm & Data Structure I: 72

Algorithm & Data Structure II: 85

Discrete Maths: 90

OPEN COURSE

Joy of React by Josh Comeau

UC Berkeley CS61B: Data Structures

Machine Learning ↗ by Andrew Ng

OTHER

Visa: Stamp 4 - Permanent resident
I enjoy sketching architecture