# Henry Zhu's Resume

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Software Engineer II (E4) at Meta with 3+ YOE in industry, hoping to work on cutting-edge distributed computing, backend development, and end-to-end experiences that delight customers and create business value.

#### Industry/Research

### Software Engineer II (E4), Meta

Early 2022-present: Recognized as a high performer with every rating being Exceeds Expectations or higher.

Messaging API team: Working on back-end observability systems and performance optimization for Msys, Meta's centralized, cross-platform, and protocol-agnostic messaging library (C/C++, Java, Kotlin, Python, and SQL/NoSQL). Currently I am working on C/C++ code-generation for distributed logging and tracing on both client and server-side logic across Meta's family of apps. Previously, I accomplished the following:

Built complete E2E telemetry pipeline to measure API metrics (latency, IO queue waiting time, etc.) with dashboard + alerting.
Developed a new, unified tracing/logging infrastructure that combines fragmented systems into one and abstracts away complicated logic, making it easier for engineers to integrate tracing/logging into their Msys integrations.

Built a caching system that reduced logging data memory usage on a confidential project from 400 KB to 3 KB (-99.25%).
Combined individual queries for fetching message list data, from text to reactions into a single query, reducing latency by 15% due to lower overhead (e.x. context switching b/w threads) and reduced LOC by 20%. Integrated it into Facebook Lite (Android).
Integrated PRE (Performance, Reliability, and Efficiency) metrics into messaging platforms.

6. From start to finish, developed and integrated send image/video/audio APIs on both open and encrypted conversations on Meta's Android apps.

#### Software Engineering Intern, Microsoft

<u>Mid 2021</u>: Cloud + AI Division: In the Platform Engineering Team, I am advancing the industry's standard for testing ABAP code, by developing a compiler-level ABAP interpreter + transcoder which can auto-generate ABAP code coverage reports and unit test code. This product left-shifts ABAP testing, allowing enterprise products to be shipped faster. Technologies Used: C#, ANTLR, Microsoft IntelliTest.

#### Undergraduate Research Assistant, UC-Davis

Early 2020: Pre-processed data and trained a neural network to identify swine farm locations based on satellite imagery, given data sets of known swine farm latitude/longitude coordinates.

#### Software Engineer, CodeLab

Late 2020-Early 2021: Built Ambii's internal tool (https://ambii.io/) to query/update their database w/ React/backend APIs.

#### Software Engineering Intern, Microsoft

<u>Mid 2020</u>: In the Enterprise Security Team, I developed a change monitoring system that auto-emails managers when employee privileges change, displaying those changes onto a PowerBI report (C#, Azure Cosmos DB, Microsoft Graph).

#### Software Design Engineer Intern, Microsoft

<u>Mid 2019</u>: Worked for Microsoft through a contract from Pactera Technologies. Programmed an AI/ML system that tags developer tickets through Python (Scikit-Learn, XGBoost, NLTK) and SQL. Streamlined E2E production pipeline.

## Education

UC-Davis: <u>Sept 2019 – Mar 2022</u>, B.S. Computer Science (Finished 4-year degree in 2.67 years (1.33 years early)). Concentrated on computer architecture and networking, programming in a variety of lower-level languages from C/C++ to x86 assembly.

#### Accolades

**Invited Speech at the 2018 Chinese Institute of Engineers Annual Convention as its Top Scholarship Winner** Gave a speech titled, <u>What kind of influence will AI have on our future?</u>.

# **2017 USA Computing Olympiad Gold Division Qualifier**: Achieved a <u>perfect score</u>, ranked 2<sup>nd</sup>/579 internationally. **Skills**

Languages: Java, Kotlin, Python, C, C++, JS, C#, SQL | <u>Systems</u>: Windows, Linux, macOS | <u>System Design/Scalability</u> | <u>OOP/Design Patterns</u> | <u>AI/ML/Data Science</u>

#### Projects

**DiffFinder** (Early 2020): DiffFinder and the upgraded DiffFinder 2 are Android apps that highlight differences between 2 files (plain text/Docx/PDF) or 2 inputted texts. Totalled  $\approx$  10,000 downloads with high ratings from 176 countries. **Chatiton.com** (Summer 2019): Map-based chatting platform that integrates a 3-D map-based UI (Mapbox, Node.js, Heroku) **Mazebattles.com** (Summer 2018): Programmed a site where users race to solve mazes generated using Prim's Minimum Spanning Tree Algorithm (Node.js+Socket.io).

Languages: English, Mandarin, and French