Max Fierro

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ACADEMIC HISTORY

University of California, Berkeley

Aug. 2021 – July 2025

B.A. Computer Science, Minor in Mathematics; GPA: 3.51

Berkeley, CA

Selected Coursework: Operating Systems and Systems Programming, Introduction to Database Systems, Computer Architecture, Efficient Algorithms and Intractable Problems, Discrete Mathematics and Probability Theory.

Professional Experience

Software Engineer Intern (ML Systems)

May 2024 – Aug. 2024

Meta Platforms, Inc.

Menlo Park, CA

• Starting work with the Ads Training Data and Model Infrastructure group in Summer of 2024.

Software Engineer Intern (Ads Optimization)

May 2023 – Aug. 2023

Meta Platforms, Inc.

Menlo Park, CA

- Work on a pre-alpha advertiser value optimization feature within the Ads Bidding team.
- Contribute to data schema and system design via comprehensive feasibility studies.
- Collaborate with product designers and market researchers to consolidate an alpha specification.
- Expand the Meta Ads Manager web interface to produce bid multiplier data to global ad delivery system.

MetaU Engineering Intern (WhatsApp)

June 2022 – Aug. 2022

Meta Platforms, Inc.

Menlo Park, CA

- Learned large-scale application design with the WhatsApp Data Archive and Transport team.
- Participated in a bootcamp-style course on Obj-C and Swift iOS development using UIKit and SwiftUI.
- Designed and implemented a task management application (see "Process") as a capstone project.

Lead Endpoint Engineer

May 2022 – Feb. 2024

UC Berkeley SAIT

Berkeley, CA

- Provide advising to **UC Berkeley IT leaders and CIO** as part of the Student Technology Council.
- Lead an endpoint management team responsible for the security and accessibility of more than 400 devices.
- Maintain campus partnerships and oversee organizational work, such as the hiring of 3 engineers.

CURRENT AFFILIATIONS

 ${\bf GamesCrafters} \mid {\bf Prof.} \ \, {\bf Dan} \ \, {\bf Garcia's} \ \, {\bf computational} \ \, {\bf game} \ \, {\bf theory} \ \, {\bf applied} \ \, {\bf research} \ \, {\bf group}.$

Jan. 2023 – Present

- Developed a strong solution to Five-Field Kono, a game of $> 10^9$ positions (play against solution).
- Re-architected C codebase for ergonomics, safety, and multi-processing support (see "GamesmanNova").
- Designed an **LSM-Tree based database engine** for enabling parallelization in game solves while optimizing for game-theoretic algorithms' access patterns.

Selected Projects

GamesmanNova | Abstract strategy game analysis system.

- System for performing **full game tree exploration** on deterministic abstract strategy finite-state games, storing and analyzing their complete solutions efficiently, and serving them to GamesCrafters' user interfaces.
- Simple multithreaded implementations of solution set analyzer, solving algorithm, and DBMS modules.
- Working on supporting OpenMPI for solves on **High Performance Computing clusters**.

Process | Task management application for iOS.

- Allows for many-to-many graph of task-subtask relationships, as opposed to simple or nested lists.
- Served using **Firebase** Auth, Storage, and Firestore (although Neo4j is better suited for storing graphs of tasks).
- Features a recursive UI for intuitively traversing subtask items, built with Swift and SwiftUI.

TECHNICAL SKILLS

Tools and Frameworks: Git, Mercurial, OpenMPI, OpenMP, SQL, Ent, React, SwiftUI.

GPPLs: Rust, C/C++, Java, Swift, Python, JavaScript.