

MAX DARLING

maxhdarling@gmail.com | maxdarling.org/professional

EXPERIENCE

Software Engineer (backend, product)

DoorDash

San Francisco, CA

Sept '21 - now (1.5yrs)

- Led a 3-month cross-functional project. Designed and implemented a scalable, high-quality feature in the merchant portal. Led discussions to reach cross-team alignment and avoid multiple blockers. Delivered on-time despite a tight deadline. Increased Storefront merchant signup rate by 45% rel.
- Led a migration of Storefront's backend signup flow to utilize Cadence for fault-tolerance. Designed, implemented, and led the migration successfully. Prevented 2 outages in H2 and saved 20 eng hrs/yr in post-incident cleanup.
- Led team to increase integration test coverage for Storefront's backend service. Revamped development process by writing test scripts, guides and documentation, saving 25 eng hrs/yr. Identified owners and created timelines, and finished on-time. Achieved 100% coverage for public read-only endpoints (from 9%) by adding 20 new tests. Tests caught 3 bad deploys in H2, preventing 3 potential outages.
- Technical ownership of several areas, including the above. Built dashboards, alerts, and documentation to ease maintenance overhead.
- Excellent technical writer/speaker: design docs, postmortems, high-level problem summary, documentation.
- Excellent project manager: proactive communicator, quickly unblocks self and others, leads teammates, drives productive cross-team negotiations, quickly adapts to changing requirements, delivers on-time + high-quality features.

Past Internships: IXL Learning, SoundHound Inc., Mitsubishi Research Institute

EDUCATION

Stanford University

Stanford, CA

- B.S. in Computer Science

2017-2021

PROJECTS

nand2tetris

Winter 2022

Implemented every layer of a pedagogical computer (~100hrs)

- Used a basic HDL to implement computer hardware, including: logic gates, Adder, ALU, registers, CPU, RAM. Started from Nand gates only.
- Implemented an assembler, VM, and compiler from scratch for a high-level, Java-like language.

Raft

Spring 2021

From-scratch distributed consensus (C++)

- Implemented the Raft consensus algorithm using no libraries over several weeks. Created an efficient and generalizable messaging protocol from C sockets.
- Worked under the author of Raft, John Ousterhout, and received recognition for my design.
- Implemented log compaction (snapshots) for my Senior project under Prof. Ousterhout and presented my design.

Pintos

Spring 2020

From-scratch operating system (C)

- Created an OS (Pintos) with fully functional virtual memory, concurrency, and file system.
 - Wrote interrupt routines, a page fault handler, frame eviction and allocation algorithms, and many core syscalls.
 - Architected concurrency models for both virtual memory and parent-child processes.
-

SKILLS

Languages & Technologies

- Kotlin, Python, Bash, C++, Java, C, Typescript
- Docker, Kubernetes, AWS, Cloudflare, Envoy, Kafka, Cadence, gRPC, CockroachDB, GraphQL, Gradle

Computer Science

- Systems: OS, distributed systems, database internals, compilers
- Theory: algorithms, graph theory, combinatorics, complexity theory, probability