Ziray Hao

✉ ziray.hao.22@dartmouth.edu   in linkedin.com/in/zirui-hao   ☎ 860 • 301 • 7761

Experience

Skiff | Product Engineering Intern
San Francisco CA • June 2021 — PRESENT

— Building a privacy-centric document collaboration platform. Engineering product features within an end-to-end encrypted, decentralized architecture.

Own Up | Software Engineering Intern
Boston MA • DEC 2020 — JUNE 2021

— Engineered serverless functions and orchestrated state machines to execute complex mortgage offers computations for quoting engine backend.

— Designed in-house cloud resources SDK to programmatically integrate AWS Lambdas, DynamoDB queries, and SNS events into multi-step state machines, accelerating developer velocity and widening DevOps visibility.

— Scripted unit and integration tests with Jest to reach maximum scenario coverage before each feature deployment.

DALI Lab | Student Software Engineer
Hanover NH • JAN 2019 — JUNE 2020

— Worked in tandem with UX researchers and UI designers through Agile process to swiftly deliver weekly live React Native prototypes for rapid user-testing.

— Deployed and scaled two Node.js applications on Heroku in direct partnership with Dartmouth College administration for over 2,000 users.

Plug and Play Ventures | Summer Analyst
Sunnyvale CA • JUNE — AUG 2019

— Co-led $150K seed investment in a cybersecurity startup to strategically shift our firm into an emerging technology space.

— Built Python data-scrapers to automate startup sourcing, optimizing workflow efficiency by ~25x for $200M venture fund.

Projects

Trailhead Platform
`React` `ExpressJS` `MongoDB` `AWS S3` • doc.dartmouth.edu

Re-engineered web platform with critical COVID contract-tracing system to safely coordinate outdoor trips among 1,500 members of the country's largest collegiate outing club.

High-dimensional outlier detection algorithms
`Python` `Jupyter` `Clustering` • Dartmouth Computer Science Dept.

Implemented a dynamic programming algorithm coupled with K-Means clustering that surpass current precision and recall benchmarks in detecting in high-dimensional anomalies in network intrusion and cancer imaging datasets.

D-Planner
`React` `ExpressJS` `MongoDB` `Figma` `BigQuery` • d-planner.com

Won $20,000 grant from startup competition to design and build a degree-planning app now used by over 800 Dartmouth students to visualize and map out their academic schedules.

Education

Dartmouth College, A.B.

Major in Computer Science
Minor in Human-centered Design and Philosophy, Class of 2022

GPA   3.84

Data Structures • Algorithms
Full-stack Dev • Machine Learning
Game Dev • Computer Architecture
Data-stream Algorithms

Rufus Choate Scholar 2019: top 5% of class

Skills

Proficient	Familiar
TypeScript — 11 projects	Java — 4 projects
Python — 5 projects	Unity & C# — 3 mini-games
React & Redux — 5 apps	SQL — many queries
ExpressJS — 6 APIs	GraphQL — many mutations
Figma — 4 UI projects	Test-Driven Dev — 120 suites

Fun

DSLR 1,602 shots	Origami τ models

Leadership

The Dartmouth, Inc.
Technology Director

Trained a team of six student engineers to build a newspaper mobile app for 4,000+ students.

DALI Lab
Partner Relations Lead

Secured three paying client leads in 2020FY to deliver critical MVPs and envision product strategy.