

# Samyok Nepal

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## Education

**University of Minnesota, Honors** (B.S. in CompSci & Math, 3.93 GPA)

Sep 2022 - May 2026

**Stanford University** (Visiting Student)

Summer 2023

- Machine Learning (CS 229) and Artificial Intelligence (CS 221)

## Skills, Technologies, and Awards

**Skills:** Python, Typescript, C++, Go, JavaScript, React, React Native, NodeJS, HTML/CSS

**Technologies:** MongoDB, MySQL, Firebase/Firestore, Figma, Google Cloud Platform, Kubernetes, Docker, Git/Github, Vim

**Awards:** MLH Top 50 Hackers (2023), 1st Education @ HackMIT, US Congressional App Challenge Winner, USACO Gold Division

## Experience

**Jane Street, Incoming Software Engineering Intern**

May 2024 - Aug 2024

- Will be working on the Software Engineering team next summer.

**Robinhood, Software Engineering Intern**

May 2023 - Aug 2023

- Currently working on the Options Platform team to build a new feature for Robinhood's 22 million users using **Python** and **Go**.

**Art of Problem Solving, Curriculum Developer** (Part Time)

Apr 2023 - Present

- Developing engaging and challenging problem sets, practice exams, and handouts for AoPS's premier online competitive coding training program, CodeWOOT. Curriculum in **C++**.
- Assist twice a week in teaching online classes of 20-50 students answering questions, guiding students, and helping debug.

**Fiveable, Software Engineer** (Full Time/Gap Year)

Sep 2021 - Aug 2022

- Architected and implemented low-level WebRTC voice and video calling functionality. Started as a proof-of-concept and then scaled to general availability on Google Kubernetes Engine.
- Reduced application load times by 20x on high-traffic pages by optimizing database queries, network requests, and re-renders.
- Designed and built user-facing features using **Typescript**, **Next.js**, **React**, Redux, Material UI, and **MongoDB**.

**Scioly.org, Developer** (Part Time)

Sep 2019 - Aug 2022

- Developed custom PHP image gallery and file storage server to be used by more than 68,000 registered users.
- Implemented an image optimization service to reduce image file sizes by up to 80% and serve at the edge.

## Technical Projects

**GopherGrades, Lead Developer** (umn.lol)

Nov 2022 - Present

- Developed a grade transparency tool designed to provide students with past grade distributions for classes and professors. Serving 2M+ queries, 30k+ unique users, 1.2k+ browser extension downloads. Tech: SQLAlchemy, **Pandas**, **NextJS**, **React**, ChakraUI

**HearShot** (github)

2nd @ LAHacks 2023

- Developed a hardware hack with a low-latency radio receiver using a Raspberry Pi for real-time monitoring of police dispatch radio.
- Implemented a transcription pipeline using Whisper for live transcription of audio and location identification using Claude and the Places API.
- Built a NodeJS messaging server for push notifications and a React Native frontend with custom components for displaying alerts, transcriptions, and notifications.

**GreyDuck** (github)

1st (Education), Top 5 @ HackMIT 2022

- Implemented an ensemble model that rewrites problematic code segments and provides justifications to facilitate learning.
- Built a VSCode extension connected to a platform-agnostic REST microservice for real-time code analysis and suggestions.

**Anony.news** (github)

3rd @ Hack for Humanity 2022

- Used OpenCV, OpenFace, and ffmpeg to detect, identify, and selectively blur all unrecognized faces in real time.
- Automated deployments to DigitalOcean droplets using Docker Compose and GitHub Actions.