

Joshua Dirga

+1 (607) 262-9541 | joshuadirga.com | jd2262@cornell.edu | linkedin.com/in/joshua-dirga | github.com/JoshD94

EDUCATION

Cornell University, College of Engineering

Expected December 2026

Bachelor of Science in Computer Science, Minor in AI, GPA: 3.8

Ithaca, NY, USA

Relevant Coursework: Machine Learning, Databases, Computer Graphics, Networks, AI Reasoning, Computer Systems, Algorithms, Data Structures, Discrete Math, Linear Algebra

TECHNICAL SKILLS

Programming Languages: Python, TypeScript, JavaScript, Java, SQL, Swift, Go, C, OCaml

Frontend & Mobile: React, React Native, Next.js, SwiftUI, Kotlin, Tailwind, HTML/CSS

Backend & ML: Node.js, Flask, Express, Spring Boot, REST, GraphQL, PyTorch, NumPy, scikit-learn, OpenAI API

Data & Infrastructure: PostgreSQL, MySQL, MongoDB, Supabase, AWS, GCP, Docker, CI/CD, Git, Linux, WorkOS

WORK EXPERIENCE

Co-Founder & Engineering Lead

Jan 2026 – Present

Alora Technologies Pte. Ltd.

Remote

- Co-founded a Singapore-incorporated AI operations company and lead **3 developers** building CRM, project-management, inventory, and HR platforms for **3 paying clients** across the UK and Indonesia, securing **\$26K+**
- Architected a permission-aware AI harness with **Next.js, TypeScript, OpenAI API, WorkOS, and Supabase/Postgres RLS** that lets companies query their own operational data; serving **20 users, 600+ contacts**, and **6 warehouse workflows**

Software Engineer

Oct 2024 – Jan 2026

The Single Cask

Remote

- Built and deployed a custom CRM for **600+ contacts** and **50+ suppliers** with **React, Next.js, and PostgreSQL**, migrating operations off Excel with 4-tier access control and Microsoft SSO; engagement later converted into Alora's founding client

Data Science Intern, KYC Data Science Team (returning)

May – Aug 2025

GoTo Financial

Jakarta, Indonesia

- Improved face anti-spoofing to **99.8% validation accuracy** using **3,000+ synthetic deepfakes**; red-teamed the liveness pipeline with **1,000+ adversarial samples**, surfacing a **66.5% bypass rate** and evaluating gaze-based defenses
- Reduced voice-generation compute by **55%** through caching for an AI phone system handling **400+ concurrent calls**

Data Science Intern, KYC Data Science Team

May – Aug 2024

GoTo Financial

Jakarta, Indonesia

- Built a deepfake detection model reaching **90%+ accuracy** on **20,000 images** with **PyTorch**; cut inference time **50%** via benchmarking for ISO/IEC 30107-3 certification

Backend Lead and Course Instructor

Sep 2024 – Present

Cornell AppDev

Ithaca, New York

- Promoted from backend developer to lead, now Senior Advisor; led **13 developers** and owned **CI/CD** for **6 live apps** serving **5,000+ users**, cutting web-scraper memory and cost **50%** each via garbage-collection tuning
- Taught **80+ students** across two semesters of CS 1998 backend development, supervising **10 TAs per semester** for a **100% pass rate**

RESEARCH EXPERIENCE

Undergraduate Researcher

Apr 2026 – Aug 2026

Cornell Systems Engineering, Global Climate Innovation

Ithaca, New York

- Built a **6,390-row** longitudinal panel covering **230 countries, 1995–2024**, then developed Python fixed-effects and distributed-lag analyses linking patents, deployment, and emissions; preparing a paper under a **\$5,000 Cornell grant**

SELECTED PROJECTS

- Double Chin** (SwiftUI, AVFoundation, Supabase, StoreKit 2): Solo-launched a private daily-photo iOS app with multi-camera capture, partner-scoped storage, APNs, and subscriptions [App Store](#)
- Vividly** (React Native, SQLite): Memory app for Alzheimer's patients, **1st Place, RCareWorld Hackathon 2024** [GitHub](#)
- Nocturne** (React Native, Flask, OpenAI): Mood-based music generation, **2nd Place, Big Red Hacks 2024** [DevPost](#)

LEADERSHIP EXPERIENCE

- Indonesian Association at Cornell**, Former Co-President (Aug 2023 – Present): Led IndoNight for **200+ attendees**; campaigns generating **100K+ views** grew membership **20%**