



# Gurinder Singh

Staff Software iOS & AI/ML  
Engineer

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SCAN FOR  
PORTFOLIO

## Career Summary

Staff iOS & AI/ML Engineer with over a decade of experience scaling applications for **millions of users**. **Patent-holder** and technical leader specializing in bridging cutting-edge AI/ML with practical mobile solutions. Proven track record of building **legendary apps at global scale**, from startup innovation to enterprise solutions serving **90M+ users worldwide**. Passionate about mentoring engineers, conducting technical interviews, and fostering inclusive tech communities while driving innovation at the intersection of iOS and artificial intelligence.

**90M+**

Users Impacted

**28+**

Hackathons

**2x**

1st Place Wins

**Patent**

Holder

## Core Skills

### Languages & Frameworks

Swift, SwiftUI, Python, TypeScript, Next.js, FastAPI, Vapor, Objective-C, Flutter/Dart

### AI/ML Stack

LLM Agents, RAG Pipelines, LlamaIndex, Supabase, ChromaDB, Pinecone, Core ML, MLX, LoRA, Stable Diffusion

### Mobile Systems

UIKit, WidgetKit, Dynamic Island, SwiftData, Realm, Combine, SwiftUI, Async/Await

### Cloud & Infrastructure

Supabase Edge Functions, Docker, RunPod, DataDog, AWS Serverless, Lambda, DynamoDB

### Dev Practices

CI/CD Automation, Observability, Snapshot Testing, State Machines, Accessibility

### Creative Tooling

FFmpeg, ComfyUI, ElevenLabs, Whisper-MLX, MCP, Bluetooth Low Energy (BLE)

## Experience

### Staff iOS Engineer → Applied AI/ML Engineer

PayPal / Venmo

2020 – Present

#### AI/ML Evolution & Technical Innovation (2023–Present)

##### Team Mercury – AI-Powered Agentic E-Commerce Platform (October 2025)

- Built PayPal/Venmo's **first applied agentic AI platform** for autonomous merchant onboarding
- Pioneered AI image generation with custom **SDXL LoRA models** producing professional imagery in ~30 seconds, **saving merchants \$100–\$500 per product**
- Delivered **first org-wide MCP integration** for seamless AI agent orchestration
- Achieved **58.5 GPU hours training, 23% loss reduction**, 109MB production-ready model
- Implemented multi-platform automation managing Venmo, Honey, Facebook/Meta, Google Ads, and TikTok

##### AI/ML Implementation & Automation (2024)

- Developed **AI-powered crash detection system** using LangChain + DeepLake – **now adopted org-wide**
- Created **10%+ productivity improvements** via AI-powered automation tools
- Championed AI coding assistants across teams

#### iOS Engineering Excellence & Business Impact

##### Major Product Launches & Partnerships

- **Amex Partnership (2020):** Built payment-splitting for **\$400M partnership deal**
- **Pay With Venmo Checkout (2024–Present):** Key stakeholder with server-side Swift implementation
- **QRC Touch-Free Payments:** Led initiative winning **\$60M CVS contract**
- **Venmo × Amazon Partnership (2023):** Built sandbox/integration app in **two days**

##### iOS Innovation & Patents

- **QRC Widget Patent (2022):** Filed "Interface Widget Tool for Automatic QR Code Generation" – **Reduced user friction by 66%**
- **Dynamic Island / Live Activities:** Built end-to-end infrastructure with server-side Swift
- Architected features reaching **millions of active users**

#### Technical Leadership

- Mentored cross-functional engineers on concurrency, accessibility, and feature-flag development
- Partnered with Design Systems to create SwiftUI component library that **cut development time by 30%**
- Built internal AI observability tooling using DataDog

### iOS Developer/Consultant

Google Stadia

July 2019 – 2020

- Worked on Google Stadia for mobile platforms in Flutter/Dart
- Leveraged iOS expertise for native plugins and crash debugging

### iOS Developer/Consultant

- Hybrid Banking and Wealth Management apps for iOS
- Key features: check-deposit, **biometric authentication**, certificate-pinning, jailbreak detection
- Migrated codebase from 98% Objective-C to 80% Objective-C / 20% Swift

## Technical Leadership & Team Building

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### Advisory Board & Strategic Leadership

- **Advisory Board Member** for multiple tech startups on iOS architecture and AI/ML implementation
- Conducted **technical interviews** for senior iOS and AI/ML positions
- Strategic advisor on product roadmap decisions and technology stack selections

### Mentorship & Knowledge Sharing

- Hosted technical workshops: **SwiftUI, State Machines, AI/ML image generation, DataDog automation**
- Created comprehensive documentation for ML architects and non-technical stakeholders
- Onboarded and mentored multiple senior engineers with growth plans and advancement advocacy

## Hackathon Achievements & Innovation

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**28+ hackathons** attended across **6+ countries** as participant, mentor, and judge. Earned **2 first-place wins** and served as judge at Yale (2x). Recognized globally for innovation and technical excellence.

 **MLH @ Bloomberg London (2017)** 

**Automated Search & Rescue System** – Won among 500+ participants. **Featured in BBC documentary.**



 **Devcamp NYC (2016)** 

**Talent Management App** – Won among 300+ participants at Google NYC.

 **HackZurich (2018)** 

**AR Car Buying Tool** – Finalist among 400+. Featured in Credit Suisse interview. **Attended HackZurich 4x**

### Mentorship & Judging

- **Hack Yale** – Judge (2x) – Yale University 
- **PenApps** – Mentor – University of Pennsylvania 

## Cultural Impact & Community Leadership

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### Diversity & Inclusion

- **Interfaith ERG Chapter Lead (Sikh community):** Organized events, secured speakers, created educational content
- **Built next generation:** Represented Venmo at Yale hackathons and high school tech education initiatives

### Recognition & Awards

- **Multiple PayPal Props Awards:** Paragon (5000 pts), Phenom (1500 pts), Powerhouse (750 pts)
- Consistent "**Successful**" **performance ratings** with leadership principle exemplification
- Recognized for: **Customer obsession, innovation mindset, collaboration excellence, building next generation**

## Education

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New York City College of Technology, Brooklyn  
**BS in Computer Systems (Deferred)**

2012 – 2016

*Building legendary apps at the edge of iOS & AI.*