



Gurinder Singh

Staff Software iOS & AI/ML Engineer

Building legendary apps at the edge of iOS & AI

 Portfolio

 LinkedIn

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SCAN FOR PORTFOLIO

90M+

USERS IMPACTED

28+

HACKATHONS

2x

1ST PLACE WINS



PATENT HOLDER

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.

Built with

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 • SwiftUI • Core Data • Realm • Combine • 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

Built with

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

Built with

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

- ▶ 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



iOS Engineering Excellence & Business Impact

- ▶ 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
- ▶ 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



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

Built with



iOS Developer/Consultant

Morgan Stanley

April 2018 – July 2019

- ▶ 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

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

Built with

HACKATHON ACHIEVEMENTS & INNOVATION

28+ hackathons attended across 6+ countries as participant, mentor, and judge. Earned 2 first-place wins and served as judge at Yale (2x).

🏆 1st Place

MLH @ Bloomberg London (2017)

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

🏆 1st Place

Devcamp NYC (2016)

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

🥈 Finalist

HackZurich (2018)

AR Car Buying Tool – Finalist among 400+. Attended HackZurich 4x

EDUCATION

New York City College of Technology, Brooklyn

BS in Computer Systems (Deferred)

Built with

COMPREHENSIVE TECHNICAL SKILLS (ATS / RECRUITER REFERENCE)

This page provides an exhaustive list of technologies and tools for ATS optimization and detailed recruiter reference. For high-level overview, please refer to Core Skills on page 1.



Languages & Frameworks

- Swift
- SwiftUI
- Objective-C
- Python
- JavaScript
- TypeScript
- Node.js
- React
- Next.js
- React Native
- Flutter/Dart
- FastAPI
- Vapor
- Express.js
- GraphQL
- REST APIs
- HTML5
- CSS3



AI/ML & Intelligent Systems

- LangChain
- LlamaIndex
- RAG Pipelines
- MCP Servers
- Manus Platform
- CrewAI
- LangFlow
- Prompt Engineering
- Function/Tool Calling
- Custom GPT Actions
- Multi-Agent Orchestration
- PyTorch
- TensorFlow
- Core ML
- MLX
- scikit-learn
- Stable Diffusion
- LoRA Fine-Tuning
- Whisper-MLX
- Hugging Face
- Cohere
- OpenAI APIs
- Claude API
- OpenRouter
- Ollama
- LM Studio
- ChromaDB
- Pinecone
- Qdrant
- DeepLake
- Dense + Sparse Retrieval
- Semantic Search
- Hybrid Indexing
- Reranking
- Computer Vision
- NLP
- Speech Processing
- ComfyUI
- ElevenLabs

Built with



Mobile Development (iOS + Cross-Platform)

iOS SDK

UIKit

UIKit

WidgetKit

Dynamic Island

ARKit

Core Data

Core Location

Core ML Integration

On-Device Inference

SwiftData

Realm

Combine

RxSwift

Async/Await

BLE

XCTest

Snapshot Testing

Swift Package Manager

Cordova

Accessibility (A11Y)



Web & Application Development

Serverless APIs

Edge Functions

PWAs

SSR / SSG / ISR

Authentication (OAuth, JWT)

RLS (Row Level Security)

WebSockets

Realtime Communication

SEO Optimization

Performance Profiling



Cloud Platforms & Infrastructure

AWS Lambda

DynamoDB

EC2

S3

CloudFront

API Gateway

SageMaker

Amplify

CloudWatch

IAM

Cognito

GCP Vertex AI

Cloud Functions

Cloud Run

BigQuery

Firebase

Firestore

Cloud Storage

Vision AI

Speech-to-Text

Cloud SQL

Azure AI Services

Cognitive Search

Azure Functions

Azure OpenAI

Cosmos DB

Azure DevOps

DigitalOcean

Supabase

Vercel

Netlify

RunPod

Replicate

Multi-Cloud Architecture

Microservices

NGINX

Built with



Data Science & Analytics

Pandas

NumPy

Feature Engineering

Data Architecture

Model Evaluation

A/B Testing

Experimentation

PostgreSQL

SQLite

MongoDB

Redis

Vector Databases



DevOps & Observability

Docker

Docker Compose

Kubernetes

Git

GitHub Actions

Jenkins

Fastlane

CI/CD Pipelines

Terraform

Pulumi

CloudFormation

DataDog RUM

DataDog APM

DataDog Logs

Amplitude

Sentry

New Relic

Grafana

Prometheus

Optimizely

Crashlytics

SonarQube

BrowserStack

ESLint

SwiftLint

Prettier

TDD

UI Testing

Metrics Instrumentation

Event Tracking

Feature Flagging



Automation & Integration

MCP Server Development

AI Workflow Automation

n8n

Playwright

Puppeteer

Selenium

BeautifulSoup

FireCrawl

Webhooks

API Integration

Business Process Automation



Design & Generative Tools

Built with

- Figma

Sketch

Adobe XD

Photoshop

Automatic1111

OpenWebUI

FFmpeg

Lottie

Audio/Visual Generation



Collaboration & Project Management

- Agile

Scrum

Kanban

Jira

Linear

Confluence

Notion

Slack

Microsoft Teams

Technical Documentation

Architecture Decision Records

Runbooks

RECOGNITION & AWARDS



PayPal Props Awards

Paragon (5000 pts), Phenom (1500 pts), Powerhouse (750 pts)



Performance Excellence

Consistent "Successful" ratings with leadership principle exemplification



Cultural Leadership

Interfaith ERG Chapter Lead (Sikh community), Yale hackathon judge, tech education advocate