

JACOB E. BARCELONA

Software Engineer — Mobile · Web · Machine Learning

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SUMMARY

Software Engineer shipping products end-to-end: React Native/Expo mobile apps, React web frontends, and Node/Express, FastAPI, or Django backends — plus computer-vision pipelines from data collection to production inference API. 2+ years building client systems across lending, payroll, F&B, and healthcare.

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, SQL

Frontend: React, Next.js, React Native, Expo, TanStack Start, TailwindCSS, NativeWind, HTML, CSS

Backend: FastAPI, Django, Flask, Node.js, Express, REST APIs, JWT / session authentication

ML & Computer Vision: TensorFlow, PyTorch, OpenCV, scikit-learn, MediaPipe, Dlib, pandas, NumPy

Databases: PostgreSQL, MySQL, SQLite, Supabase, Firebase

Cloud & Tooling: Git/GitHub, CI/CD, Railway, Render, Netlify, WordPress, AI-assisted development (Claude Code, OpenAI Codex)

EXPERIENCE

Software Engineer

2024 – 2026

Linoflap Technology Philippines Inc. — Ermita, Manila

- Built and delivered production cross-platform mobile apps (React Native, Expo), including a field lending & collection platform and a seafarer payroll app for a maritime services client, deployed directly to client teams on Android.
- Designed and built RESTful APIs with FastAPI, including real-time data synchronization between tablet and mobile clients that eliminated manual reconciliation of field collection records.
- Delivered LinoflapQR, a contactless QR table-ordering web platform (TanStack Start, React 19, TypeScript), deployed for client restaurant operations.
- Built the IMAI Cart Classifier, a computer-vision product, end-to-end: data collection, preprocessing, annotation, model training, and post-training optimization, served as a production inference API (OpenCV, TensorFlow, FastAPI).
- Accelerated delivery with AI-assisted development (OpenAI Codex, Claude Code), automating repetitive tasks and shortening debugging cycles to consistently hit client deadlines.

Software Developer Intern

2024

Linoflap Technology Philippines Inc. — Ermita, Manila

- Trained and deployed TensorFlow 2 models for image classification, segmentation, and object detection across multiple client use cases.
- Integrated MediaPipe hand-tracking and face mesh into a Unity game for gesture-based player control.

PROJECTS

MediQS — Healthcare EMR Portal with Outbreak Forecasting

Django · JavaScript · Bootstrap

Web platform for Manila health centers managing patient records and scheduling. Built a structural time-series model on DOH case data (2016–2022) to forecast outbreaks, plus a heuristic appointment-prioritization algorithm.

IoT Baby Cradle with Computer Vision

Flutter · Python · MTCNN · MediaPipe · Raspberry Pi

Flutter remote control for a Raspberry Pi-powered cradle. Trained MTCNN for infant face and landmark detection to verify safe sleeping position; used MediaPipe face mesh and pose detection for automated sleep tracking.

WOS Hub — Strategy & Calculator App for Whiteout Survival

React · TypeScript · Express

Self-initiated full-stack web app with guild strategy tools and in-game calculators for resource planning, built on a React/TypeScript frontend over an Express API. Reached 260+ organic search clicks in its first month through on-page SEO, with zero paid promotion.

EDUCATION

B.S. Information Technology — Magna Cum Laude

2020 – 2024

Pamantasan ng Lungsod ng Maynila — Manila

STEM Strand — Graduated with Honors

2018 – 2020

Technological Institute of the Philippines — Manila

ACHIEVEMENTS & ACTIVITIES

- Category Winner — Nervos Network Devpost Hackathon, Web3 World Challenge (2022).
- Member, Google Developer Student Clubs – PLM (2020–2024); two-time hackathon participant.