

# Jorge Pompa

Founder, Travyl LLC · Computer Science, CSU Bakersfield

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## EDUCATION

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### California State University, Bakersfield

*Bachelor of Science in Computer Science*

Bakersfield, CA

Aug. 2022 – May 2026

### Porterville College

*Associate of Science in Information Systems*

Porterville, CA

Aug. 2016 – May 2022

## EXPERIENCE

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### Founder & Managing Member — Travyl LLC

Sept. 2025 – Present

*Agentic travel assistant; live on web, iOS, and Android*

*Remote*

*TypeScript, Next.js, React Native, Expo, AWS Bedrock, Supabase, Stripe Connect, GitHub Actions*

- Founded multi-member LLC; sole engineer building an agentic travel assistant that turns a single natural-language prompt into a budget-aware, day-by-day itinerary with lodging, activities, and live price refresh
- Architected a TypeScript monorepo with shared hooks, Zustand stores, and a unified service layer consumed identically by a Next.js web app ([gotravyl.com](https://gotravyl.com)) and a React Native/Expo mobile app ([TestFlight](#), Android via Expo EAS)
- Designed the AI core on AWS Bedrock with Supabase Realtime for collaborative multi-user trip editing; integrated Duffel (flights), Hotelbeds, Viator, Cartrawler, and Stripe Connect
- Built GitHub Actions CI/CD across separate prod and dev EC2 environments; configured HTTPS/DNS via Route 53 and Namecheap

### Undergraduate Researcher — Video Generation (advisor: Dr. Chengwei Lei)

Jan. 2025 – May 2026

*California State University, Bakersfield*

*Bakersfield, CA*

*Python, PyTorch, YOLO11, BLIP2, AnimateDiff, ControlNet*

- Designed a multi-model video generation pipeline (YOLO11 + BLIP2 + AnimateDiff) using confidence-weighted keyword fusion and a temporal-chaining scoring function for cross-frame visual consistency; co-authored manuscript in preparation for CSCSU 2026

### Undergraduate Researcher — Medical NLP (advisor: Dr. Kanwal Kaur)

Jan. 2025 – May 2026

*California State University, Bakersfield*

*Bakersfield, CA*

*Python, PyTorch, Whisper, MarianMT, NLLB-200, Hugging Face*

- Designed a HIPAA-compliant bidirectional medical translation system (Whisper STT → MarianMT/NLLB-200 → TTS) for real-time doctor-patient communication; co-authored research proposal

### Data Collection & Application Programmer

Sept. 2025 – May 2026

*California State University, Bakersfield*

*Bakersfield, CA*

*Python, Pandas, NumPy*

- Built automated Python ETL pipelines extracting, cleaning, and structuring heterogeneous datasets to support funded faculty research

## PROJECTS

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### Crop Disease Detection | *Python, PyTorch, YOLOv11x, Google Colab*

May 2026

- Built a two-stage detection pipeline (YOLOv11x for localization, HSV for severity grading) across 38 merged classes from PlantVillage, PlantDoc, and PlantSeg; achieved mAP@50 of 0.995 and 99.14% top-1 accuracy with cosine LR scheduling, warmup, and augmentation
- Developed an evaluation suite generating per-class ROC curves, confusion matrices, and an automated overfitting-diagnostic dashboard; planned ablation study addressing full-image bounding-box limitations identified in mentor review

### Full Stack Web Applications | *NGINX, Node.js, JavaScript, PHP, SQL*

Dec. 2024 – Present

- Built and deployed three production sites on a self-managed DigitalOcean Droplet: [jpbdevelopments.com](https://jpbdevelopments.com), [creacionesderegina.com](https://creacionesderegina.com), [deeviaje.com](https://deeviaje.com)

### Dino Run | *C++, OpenGL, OpenAL*

Aug. – Dec. 2024

- Led a team of 5 building a 2D platformer in C++/OpenGL with LLM-assisted procedural content generation — [github.com/Brhyona/Dino-Run](https://github.com/Brhyona/Dino-Run)

**Data Mining** | *Python, scikit-learn*

Jan. – May 2024

- Implemented KNN classifier for handwritten digit recognition and K-Means clustering for solar-panel performance analysis

## TECHNICAL SKILLS

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**Languages:** Python, C++, TypeScript, JavaScript, SQL, HTML/CSS, PHP

**ML / AI:** PyTorch, YOLO, BLIP2, Whisper, MarianMT, NLLB-200, OpenCV, AnimateDiff, ControlNet, Hugging Face, SpaCy

**Frameworks:** Next.js, React Native, Expo, Node.js, NGINX

**Infrastructure:** AWS (Bedrock, Lambda, EC2, API Gateway, Amplify, SST), Supabase, GitHub Actions, DigitalOcean, Docker

**Tools & Libraries:** Git, Google Colab, Pandas, NumPy, Matplotlib