DHARSAN KESAVAN

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EDUCATION

Arizona State University — Tempe, AZ — Expected May 2030

Dual B.S., Biological Sciences (Biomedical Sciences) & AI in Business

- McKenna Life Sciences, Business and Entrepreneurship (MLSBE) — **inaugural cohort**; selective 30-student dual-degree program of the W. P. Carey School of Business and The College, with an Entrepreneurship & Innovation certificate
- SAT: 1530

CLINICAL EXPERIENCE

Banner Health — *Patient-Facing Volunteer* — 2024 – Present · 175 hours

- Assisted patients and clinical staff across hospital departments, inpatient and outpatient, at one of the largest nonprofit health systems in the United States

Physician Shadowing — *Nephrology* — 2024 – Present · 120 hours

- Shadowed a nephrologist through inpatient rounds, outpatient consultations, and dialysis management
- Observed chronic kidney disease staging, fluid/electrolyte management, and the renal effects of diabetes and hypertension

INDEPENDENT COMPUTATIONAL PROJECTS

BioPath — *Drug Interaction Checker & Compound Body-Impact Analysis* — biopath.space

- Built a computational pharmacology tool that takes a drug name, plant photo, or pill imprint and returns a single safety report covering binding targets, biological pathways, and organ-level impact
- Integrated seven scientific databases (PubChem, ChEMBL, Reactome, OpenFDA, RxNorm, PlantNet, Dr. Duke's) into one automated pipeline, with interaction, dosage, and pregnancy-safety checks
- Trained a Morgan-fingerprint CNN/MPNN on BindingDB to predict binding affinity across ~700 human proteins for compounds lacking measured data; cross-validated predictions against measured ChEMBL targets and used Tanimoto structural similarity (≥ 0.70) to transfer side-effect and interaction profiles from known analogs

Avorio — *Spaced-Repetition Flashcard App (macOS, iOS, Android)* — In development

- Implemented the FSRS-5 spaced-repetition algorithm in a single shared Rust core with native SwiftUI and Jetpack Compose interfaces; offline-first SQLite storage and LLM-assisted flashcard generation

SCHOLARLY WRITING

"Non-Pharmacological Therapies for Alzheimer's Disease: MST and CST" — *literature review* — Sept 2025

- Wrote a literature review for *Mindful Mental Health* (Medium) comparing Mnemonic Strategy Training and Cognitive Stimulation Therapy: analyzed neuroimaging evidence, interpreted effect sizes (MST $d = 0.75$), and proposed a combined MST + CST protocol tailored to the individual patient

PROFESSIONAL EXPERIENCE

Freelance Full-Stack Developer — AlóJefe & Cognifer Labs — 2025 – 2026

- Built the website and backend for AlóJefe (alojefe.com), a bilingual AI voice assistant that answers calls for trade contractors, books estimates with drive-time routing, and tracks revenue (Next.js / Vercel)
- Built and deployed the site and backend services for Cognifer Labs (cogniferlabs.com), an AI consulting firm that builds chatbots and business process automation for small businesses

HONORS & AWARDS

- **Best Delegate**, Model United Nations (high school)
- **1 gold and 3 silver medals**, Academic Decathlon — state competition (high school)

SKILLS

Biomedical	Pharmacology (drug mechanisms, receptor binding, ADME, drug–drug interactions); bioinformatics databases (PubChem, ChEMBL, Reactome, OpenFDA, RxNorm, DrugBank); renal physiology; literature review & effect-size interpretation
Programming	Python, Rust, Swift, Kotlin, TypeScript; machine learning (CNN/MPNN, model validation); React / Next.js; SQLite, PostgreSQL