Ali Krema

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EDUCATION

University of Pennsylvania, School of Engineering and Applied Sciences   Philadelphia, PA

BSE in Computer Science, Magna Cum Laude | GPA: 3.65   *2023*

- Onsi Sawiris Scholarship Recipient (2019), CIS Faculty Appreciation Award (2023), CIS TA Hall of Famer (2023)

WORK EXPERIENCE

Full-Stack AI Engineer   Jul 2023 – May 2025

Aydi

- Built and deployed AI workflow systems serving agricultural clients across LATAM and Middle East
- Developed AI Agronomist Assistant generating 700+ messages through 170+ conversations in the first month
- Designed RESTful APIs with Nest.js for scalable backend services
- Mentored junior engineer from internship to a full-time offer
- Managed cloud deployments for backend services and AI workflow infrastructure on AWS

Tech: TypeScript, Nest.js, LLM Workflows, AWS, SQL, MariaDB, Redis, React, Next.js, RAG, VectorDBs

Backend Engineer   Feb 2025 – May 2025

SAFE Investments

- Contributed to backend rewrite of fractional real estate platform processing 10M+ USD monthly
- Built JWT authentication systems and bank transfer processing pipeline integrated with Zoho CRM
- Reduced order processing errors from 3% to 0% by implementing BullMQ order expiration system
- Collaborated on data migration of 2000+ users and contracts with 30-minute production cutover
- Developed internal dashboard APIs and documented legacy system architecture for rewrite

Tech: TypeScript, Nest.js, PostgreSQL, Redis, BullMQ, Jenkins CI/CD, Sentry, Zoho CRM

SOFTWARE PROJECTS

Natural Language Database Querying System | *TypeScript, OpenAI Assistant, SQL, MongoDB, Redis*   2024

- Led 6-month AI R&D initiative, handling product management, frontend, and backend implementation
- Built multi-LLM architecture: intent classification + SQL generation, achieving 80% generation accuracy
- Solved multitenant database challenges through custom orchestration-worker workflow

AI Client Onboarding System | *Next.js, Gemini, RAG, TypeScript, Nest.js, MongoDB, Redis*   2025

- Built AI onboarding system reducing client onboarding time from 3 days to 3-5 minutes (99%+ improvement)
- Designed LLM orchestration architecture to convert client unstructured data to structured onboarding format
- Created Claude Artifacts-inspired split-screen chat/data table interface for a tight feedback loop experience
- Integrated multimodal LLM pipeline processing PDFs, audio, and text inputs

TEACHING EXPERIENCE

Class Instructor, CIS1950: Android Development   Jan 2023 – May 2023

University of Pennsylvania, CIS Department   *Philadelphia, PA*

- Led a project-based Android Development class for 15 students
- Developed comprehensive curriculum covering UI design principles and architectural patterns
- Conducted weekly 90-minute interactive lectures with hands-on coding sessions and personalized office hours

Teaching Assistant, CIS2400: Introduction to Computer Systems   Aug 2021 – Dec 2022

University of Pennsylvania, CIS Department   *Philadelphia, PA*

- Taught 500+ students in C, CPU architecture, assembly, and circuit design
- Led weekly 4-hour review sessions and coding workshops
- Dedicated 100+ hours to office hours, offering personalized assistance on homework and projects