# David Stutz

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## Education

**Stanford University** Graduation June 2027

*Bachelor of Science in Mathematics & Computer Science, Minor in Modern Languages (Spanish, Portuguese)* GPA: 4.10 / 4.0

- Relevant Coursework: Algorithms, Data Structures, Probability, Big Data, Computer Networking, Parallel Computing, Discrete Mathematics, Operating & Computer Systems, Applied Matrix Theory, Number Theory Cryptography, Real Analysis, MV Calc
- Leadership and Activities: Christian Union Caritas (President), Intramural Flag Football (Captain), Volleyball, Soccer

**Blue Valley North High School** Class of 2023

*Summa Cum Laude* GPA: 4.67 / 4.0

- Awards and Activities: 4x Science Olympiad State Champion, National Merit Finalist, National Hispanic Recognition, ACT: 36, ESL Teacher, Hospital Volunteer, FBLA National Qualifier, All-State Band, Marching Section Leader, Kansas Boys State Mayor

## Experience

**Stanford University Computer Science Theory** *June 2025 - August 2025*

*Algorithms Research Intern* *Stanford, CA*

- Selected as one of 92 undergraduate and graduate students for Stanford's competitive CURIS full-time summer research program
- Researched fairness and feasibility of combinatorial course allocation based on peer preferences with Prof. Aviad Rubinstein
- Investigated complexity, relaxations of latency minimization algorithms for caching with delayed hits under Prof. Moses Charikar

**Terracon Consultants, Inc.** *June 2024 - September 2024*

*Software Engineering Intern* *Olathe, KS*

- Owned and completed IT project to integrate logging Database from MS SQL Server to ElasticSearch through scheduled tasks
- Developed C# backend that efficiently builds fitting JSON models for incoming data moving from SQL server to Elastic endpoint
- Engineered performant SQL stored procedures and Visual Basic API connections to support companywide Oracle DB decoupling
- Reduced DataStore API functions and stored procedure runtime by >12x through hash-based caching to eliminate redundancies

**Stanford Management Group** *November 2023 - Present*

*Project Manager* *Stanford, CA*

- Consulted for Microsoft to enhance student engagement with AI technologies through Copilot, AI Learning, Student Hub
- Worked for Grammarly to incorporate Generative AI into digital writing assistant tool & extension, evaluated student satisfaction
- Researched Gen Z attitudes toward wellness and recovery technologies for Therabody, assessed student athlete market potential
- Designed 3 Qualtrics surveys (600 responses total), conducted 16 field interviews, pitched 3 slide decks to senior management

## Projects

**AskIQ |** *TypeScript, Python, React, Node.js, ChromaDB, Supabase, OpenAI API* *Summer 2025*

- Developed end-to-end AI knowledge platform that scrapes and embeds 19,000+ web pages for low-latency semantic retrieval
- Implemented hybrid retrieval-augmented generation (RAG) using OpenAI function calling to query vector & relational databases
- Built real-time streaming conversational responses with graceful fallback, context-aware switching between multiple data sources
- Delivered a secure, responsive React/Tailwind frontend with Google authentication, session persistence (Supabase), and rich UX

**Heatr |** *Python, React Native, FastAPI* *Spring 2025*

- Built a React Native cross-platform app that scans track heat sheet images using OCR and LLMs, parses athlete and school data, and overlays competitor performance stats to generate enriched heat sheets for runners, saving ~30 min of prep time per race
- Optimized Python backend performance by parallelizing data fetching and lazy-loading athlete stats, reducing load time by 95%
- Generated personalized performance insights cross-referencing athlete data across multiple public sources for accuracy & context

**Chalkboard.ai |** *LabLabAi LLaMa3 Hackathon Finalist, Python, LLaMa3, Streamlit, MongoDB* *Summer 2024*

- Engineered a solution for missing lectures by allowing students to sort generated notes by subject and download as .pdf or .docx
- Developed a Python-based Al that takes in YouTube links, any videos files and stores organized notes based on the video by user
- Connected to AssemblyAI API to convert video files into audio transcripts, used LLaMa3 to read transcripts and write notes
- Chosen as one of 5 finalists from 500+ teams and 7500+ competitors for LabLabAI LLaMa3 Global Hackathon (Top 1%)

**EZ-Chess |** *C#, HTML, CSS, Razor, Visual Studio* *Summer 2024*

- Created a web-based multiplayer Chess game through Blazor in Visual Studio, logic in C# for comprehensive endgame scenarios
- Designed beginner-friendly GUI with HTML and CSS, including visual move guides and on-screen instructions for new players
- Received praise from engineering management at Terracon, used internally as team bonding game by Terracon engineers

## Skills

**Programming Languages:** Python, C++, C, C#, JavaScript, TypeScript, SQL, Visual Basic, HTML, CSS (Tailwind), Assembly
**Frameworks & Tools:** React Native, React, Node.js, Express, FastAPI, Streamlit, MongoDB, PyTorch, Azure DevOps, Linux
**Concepts:** Data Structures & Algorithms, Full-Stack Web Development, Databases, Systems Design, OCR, LLM Integration, Agile
**Spoken Languages:** Spanish (Proficient), Portuguese (Intermediate)