# **Zayd Krunz**

### Education BASIS Tucson North

August 2023 - May 2027

Tucson, AZ

High School

Cumulative GPA: 3.79/4.0 (pre-AP score integration)

- #1 Ranked High School in the Nation (U.S. News & World Report, 2025-2026)
- **SAT Score:** 1500 ( >99th Percentile in the US)
- Current AP Courses: Calculus BC, Physics 1, Computer Science A, French, English Language, Seminar, US History
- Previous AP Courses: Calculus AB (5), Chemistry (5), European History (5), English Literature (5)

#### Skills

#### **Programming Languages**

Python, C++, TypeScript, JavaScript, Lua, PHP

#### **Software Frameworks & Tools**

Pytorch, TensorFlow, Pandas, NumPy, SciPy, PostgreSQL, Docker, Git, Bash, Linux

#### **Experience**

#### Shroot LLC

Dec 2022 - Feb 2024

Tucson, AZ

Founder & Lead Developer

- Developed a full-stack financial strategy research application using NextJS, PostgreSQL, Charles Schwab's API, and custom broker-specific authentication to execute trades autonomously.
- Engineered the complete product lifecycle from concept and UI/UX design to backend development and continuous, zero-downtime deployment to AWS.
- Ultimately, the project was put on hold to focus on academic goals.

#### **SmartNet Communications**

September 2024 - November 2024

Tucson, AZ

Web Developer

https://smartnetcommunication.com

 Developed and launched a dedicated site for an expert witness practice, establishing a required professional online presence for client verification.

TenByte

August 2024 - Present

Tucson, AZ

Technical Writer

https://tenbyte.org

• Author of monthly deep-dives on developer technologies, including technical breakdowns of open-source project management and BaaS platforms.

#### Research & Programs

## NSF AI-EDGE Institute - Summer 2025 Undergraduate Research program

June 2 - July 25, 2025

https://aiedge.osu.edu

- Participated in an 8-week NSF-funded research program that is typically open only to undergraduate students.
- Evaluated performance trade-offs between Vision Transformer (ViT) and Convolutional Neural Network (CNN) models by benchmarking accuracy against training epochs and steps.
- Compiled and analyzed the nanoGPT codebase to deconstruct the foundational architecture of a transformer-based language model.

#### Stanford Pre-Collegiate Studies

July 7 - 18, 2025

Introduction to Machine Learning

https://github.com/ShrootBuck/stanford-predictive-maintenance

Engineered a predictive maintenance model by creating & evaluating 12 machine learning models, deploying a high-recall voting classifier to forecast failures and prevent costly repairs.

Trilingual (Native Proficiency in English, French, Arabic)