

AHMAD ZEID

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EDUCATION

American University of Beirut – 3.84 GPA

Bachelor of Science in Computer Science, Minor in Statistics

– Awarded the Full-Ride MEPI-TLU Scholarship.

Beirut, Lebanon

Aug. 2024 – June 2027

University of Pennsylvania

Bachelor of Engineering in Computer Science, Study Abroad Semester

Philadelphia, USA

Jan. 2026 – May 2026

Galilee Secondary High School

Life Science Section

Beirut, Lebanon

Aug. 2021 – June 2024

RELEVANT COURSEWORK

Data Structures & Algorithms; Systems Programming; Computer Architecture & Design; Probability & Statistics; Linear Algebra; Applied Machine Learning; Internet & Web Systems

EXPERIENCE

Research Assistant

AUB, Dr. Jawad Alami

Oct. 2025 – Dec. 2025

Beirut, Lebanon

- Studied healthcare workers' trust and reliance on an AI-based decision support tool that transcribes speech and converts it into structured notes for documentation in the electronic health record (EHR) system.

PROJECTS

Cloud-Based Search Engine (*Java, AWS EC2, Distributed Systems*)

Apr. 2026 – May 2026

- Built a full-scale web search engine from scratch as part of a 4-person team for CIS 5550 (Internet & Web Systems) at UPenn; deployed on Amazon EC2 under a live subdomain.
- Integrated a multi-threaded web crawler respecting robots.txt, a distributed key-value store, a Flame-based analytics engine for batch processing, and a TF/IDF + PageRank ranking pipeline crawling 1M+ pages.
- Engineered a responsive query frontend with sub-second response times; optimized KVS lookups with parallelism and pre-folded IDF/PageRank values to reduce latency.

Campus Image Style Transfer (*Generative Models, Computer Vision*)

Apr. 2026 – May 2026

- Developed a conditional image-to-image translation model for CIS 4190 (Applied ML) at UPenn to transform campus photos across weather and time-of-day conditions (sunny/rainy/night).
- Collected and curated a custom dataset of geolocated campus images with standardized viewpoints; engineered condition encodings for time-of-day and weather dimensions.
- Experimented with diffusion-based and GAN-based architectures; evaluated models using LPIPS perceptual similarity and condition classification accuracy on a held-out test set.

Connect-4 Console Game (*C, Systems Programming*)

Nov. 2025 – Dec. 2025

- Developed a 6x7, two-player Connect-4 with win detection and input validation; designed to run on a minimal Linux VM.
- Added bot modes (easy/medium/hard) and tested with GDB/Valgrind; included autostart on boot for demo simplicity.

Notes & To-Do Web App (*Flask, Jinja, HTML, CSS*)

Feb. 2024 – Mar. 2024

- Built a lightweight web application for creating, organizing, and searching notes and tasks; implemented CRUD flows and templated UI with Jinja.
- Emphasized clean separation of routes, templates, and helpers; followed best practices for input validation and project structure.

SKILLS

Programming: Python, Java, C, C++, SQL, HTML, CSS, JavaScript

Theory/Foundations: Data Structures & Algorithms; Systems & Computer Architecture; Object-Oriented Programming; Machine Learning; Deep Learning; Computer Vision; Distributed Systems

Tools: Git, GitHub, Linux, GDB, Spark, Jupyter, Valgrind, NumPy, Pandas, Matplotlib, PyTorch, Scikit-learn, AWS EC2, BeautifulSoup