

Sepehr Akbari

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EDUCATION

Lake Forest College

Aug 2023 - May 2027

B.A. Computer Science & Data Science, Minor in Mathematics

GPA: 4.0

Relevant coursework: AI, Computer Vision, Machine Learning, Data Structures & Algos, Linear Algebra, Databases

Honors: Davis Scholar, Presidential Scholarship, Dean's List, Best All-Around Academic Record in Class of '27.

WORK EXPERIENCE

Software Engineer (Part-time)

Jul 2025 – Present

Applied Data Center

Lake Forest, IL

- Engineered and deployed modular full-stack solutions with FastAPI, Flask, Tailwind CSS, and ShadcnUI to automate administrative tasks, significantly reducing processing time and enhancing operational efficiency.

Software Engineer Intern

May 2024 – Aug 2024

TenacityAI

Chicago, IL (remote)

- Engineered key user-centered features for a React Native mobile application, suitable for both iOS and Android.
- Integrated the OpenAI API to power an in-app chatbot, boosting user engagement through interactivity.
- Strengthened application security by implementing an OTP verification flow and secure data handling modules on a Postgres platform to resolve user on-boarding and data verification issues.

Software Engineer Intern

May 2023 – Aug 2023

Elite Engineering Solutions

Tehran, Iran

- Executed a database migration from MySQL to MongoDB, improving data retrieval efficiency and scalability.
- Optimized indexing and queries, reducing critical query response times by 15% and enhanced database reliability.
- Developed and deployed new features, including a Java Swing API endpoint for asynchronous data processing.

Software Engineer Intern

Jun 2022 – Aug 2022

Lavan Energy

Tehran, Iran

- Developed a key internal data-sharing frontend using a React.js and a modular Node.js/Express.js backend.
- Engineered RESTful APIs to enable data flow across the company, supporting a shift from legacy systems.
- Containerized the new application using Docker and collaborated on its AWS deployment to ensure high availability and a consistent environment.

SELECTED PROJECTS

Semantique | Python, PyTorch, Flask, scikit-learn, Transformers

Source Code

Engineered a sentiment analysis application for movie reviews by training an RNN with LSTM from scratch on the IMDb dataset to quantify and provide a star rating from natural language text.

MyLLM | Python, PyTorch, TensorFlow, Transformers, CUDA

Source Code

Developed a large language model from the ground up, implementing different attention mechanisms and fine-tuning with GPT-oss and Qwen3 weights to build a foundational understanding of large-scale model architecture.

Randomity | Python, R, Qiskit

PyPI Page

Published a Python package capable of generating and evaluating random number sequences from classical and quantum algorithms, complete with a novel test suite.

Here is Waldo | Python, TensorFlow, scikit-learn, scikit-image, OpenCV, CUDA

Source Code

Designed a computer vision pipeline that utilizes a novel transfer learning approach to locate Waldo, showcasing a creative solution to an object detection problem.

TECHNICAL SKILLS

Programming Languages: Python, Rust, Java, Go-lang, C, C++, R, SQL, Julia, Bash, JavaScript, PHP

AI/ML & Data Science: PyTorch, TensorFlow, Hugging Face, scikit-learn, scikit-image, OpenCV, Matplotlib, Pandas, NumPy, Generative AI, LLMs, Computer Vision, Natural Language Processing

Development: React, React Native, Node.js, Express.js, FastAPI, Angular, Flask, RESTful APIs, Tailwind CSS, Shadcn UI, HTML, CSS, Bootstrap, Java Swing, Cypress

Tools & Platforms: Git, Docker, GitHub, AWS, Google Cloud, IBM Qiskit, Linux, VIM, CUDA

Core CS: Data Structures & Algorithms, Agile Development, Object-Oriented Programming (OOP), Test-Driven Development (TDD), CI/CD, Model Implementation