

# Sepehr Taherzadeh

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## EDUCATION

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### Texas A&M University

*Bachelor of Arts in Computer Science*

College Station, TX

*Jan. 2026 – Present*

## EXPERIENCE

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### Informatics Olympiad

August 2022 – August 2023

*Shahid Soltani Gifted/Talented High School (NODET/SAMPAD)*

*Karaj, Iran*

- Selected to pursue elective education in informatics & competitive programming
- Studied Algorithms and Data Structures and solved hard problems and learned from the IOI world medalists.
- Solved more than 100 algorithmic and mathematical problems in C++ (codeforces)
- Completed active learning in Algorithms, Graph Theory, Probability, Discrete Mathematics

### TAMUhack26

24 Jan 2026

*Texas A&M University*

*College Station, TX*

- Built semantic search engine processing 12K+ vehicles using Sentence Transformers and embedding-based search.

### Aggie Coding Club

Jan. 2026 – Present

*Texas A&M University*

*College Station, TX*

- Participating in weekly meetings featuring workshops on widely used technologies.
- Gaining practical experience by working on group projects and contributing to the team.

### TURTLE Robotics - Hatchling program

24 Jan 2026

*Texas A&M University*

*College Station, TX*

- Enrolled in the Hatchling training program, focusing on microcontroller programming, C++, and SolidWorks.

## PROJECTS

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### AI-Powered Vehicle Search Engine — TAMUhack 2026 |

*Python, FastAPI, Sentence Transformers, Gemini API*

- Built semantic search engine processing 12K vehicles with Sentence Transformers and embedding-based retrieval.
- Implemented LLM-based pipeline (Gemini API) to parse natural language queries into structured JSON.
- Developed personalized recommendation engine with passive preference learning from search history.
- Architected FastAPI microservice integrating ML models with React frontend under 24-hour time constraint.

### Intelligent Journal - AI-Powered Personal Knowledge System |

*Python, FastAPI, SQLAlchemy, RAG, Groq API*

- Built an AI journaling system enabling natural-language queries over personal entries using RAG
- Implemented semantic search with sentence transformers and cosine similarity for context retrieval
- Integrated Groq LLM to generate context-aware responses from user knowledge base
- Designed scalable backend with FastAPI and async SQLAlchemy for low-latency querying
- Architected system to evolve beyond journaling into planning, finance, and personal assistant tooling
- Exploring pattern detection in user behavior to provide proactive, personalized insights

### FoodVision - Vision Transformer for food image classification | *PyTorch, Vision Transformer, Gradio, Hugging Face*

- Trained ViT on 20% of Food-101, achieving 70% test accuracy
- Deployed model via Gradio on Hugging Face with public demo and weights

### Sidarm — extensible package manager for Git and Go tools | *Python, Git, JSON configuration*

- Built extensible Python package manager for Git/Go tools with config-based syncing
- Implemented bulk updates, per-user package tracking, and indexed auto-installs

## TECHNICAL SKILLS

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**Languages:** Python, C++, JavaScript, TypeScript, SQL, HTML/CSS, Bash

**Frameworks and Libraries:** React, NextJS, PyTorch, Scikit-learn, NumPy, Pandas, Matplotlib, Gradio, FastAPI

**AI/ML:** PyTorch, TensorFlow, Scikit-learn, NumPy, Pandas, matplotlib, YOLO

**Developer Tools:** Git, Docker, Github Copilot, PyCharm, vim, Command Line Proficiency