



# Echelon: Your AI Academic Advisor

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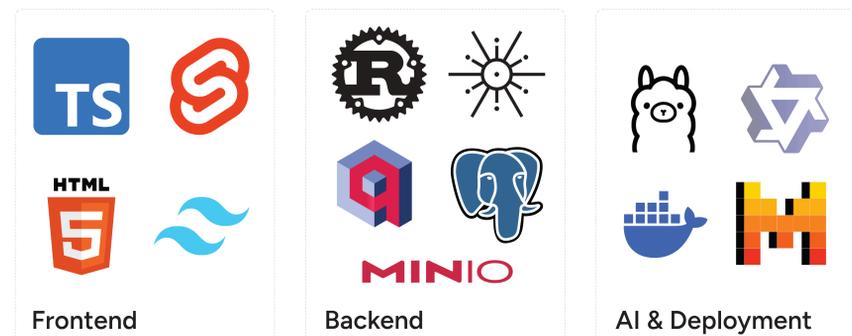
## Background

**Academic advising poses challenges for students, professors, and advisors.** Professors can't individually advise every student, and advisors may lack specific major expertise. **Echelon bridges this gap as an AI academic advisor tailored to each student.** Built on open-source large language models and trained on TCU's public documents, it offers specialized guidance with reduced hallucinations. Hosted on TCU's servers for data privacy, **Echelon is free and accessible to all students at echelongpt.com.**

## Challenges

- **Learning Curve:** the programming language (Rust) and associated frameworks were entirely new, requiring substantial time for learning and implementation.
- **Complex Deployment:** coordinating Docker Compose deployments and synchronizing across four servers introduced required careful management.
- **Tight Timeline:** designed, developed, and deployed within a single semester, significantly constraining development time.

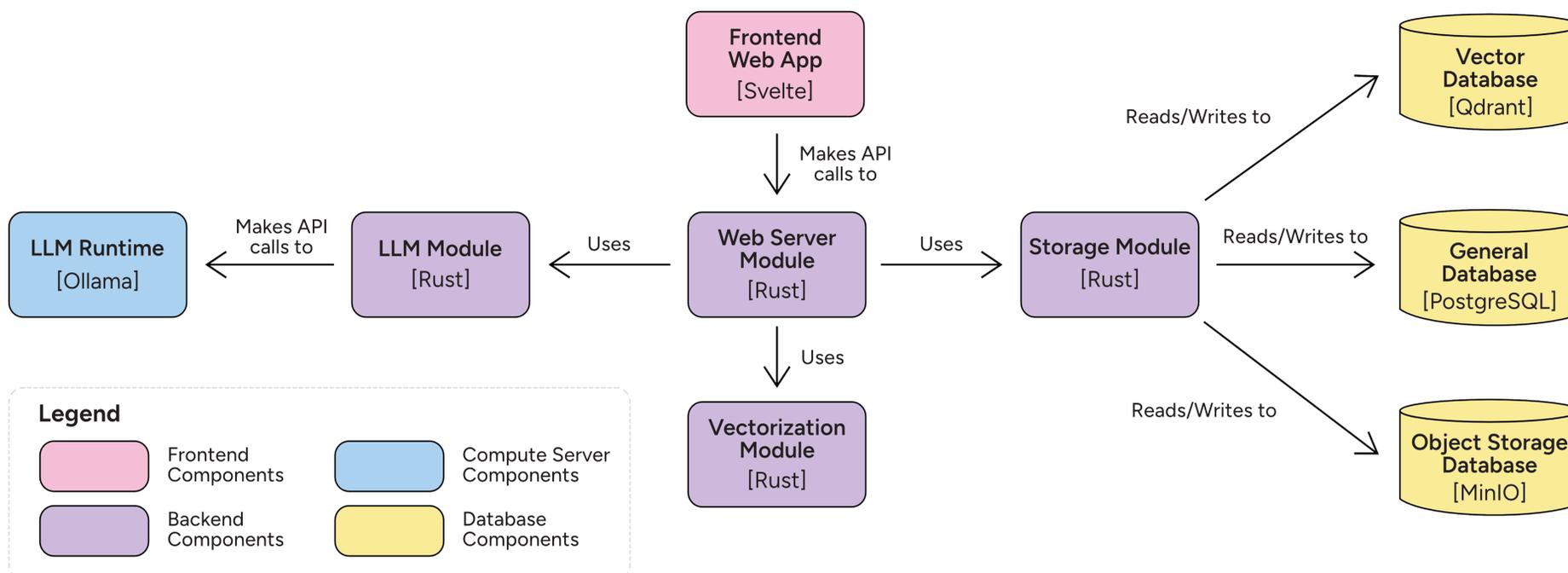
## Technology Stack



## Acknowledgements

I am deeply grateful to **Dr. Bingyang Wei** for his guidance, enthusiasm, and mentorship throughout this project. Special thanks to **Dr. Ze-Li Dou** and **Dr. Bo Mei** for serving on my honors thesis committee and for their continued support. Thank you to **CSE for awarding a SERC grant**, without which Echelon would not have been possible.

## System Architecture



## Echelon In Action

**EchelonGPT**

Am I on track to graduate by May of 2025?

Based on the information available, let's assess whether you are or graduate by May 2025.

**Current Status**

- Start Date: Fall 2021
- Current Term: Fall 2024 (courses in progress/ungraded)
- Total Credits Attempted: 78.00
- Total Credits Earned: 66.00

**Graduation Requirements**

To graduate with a Bachelor of Science in Computer Science, you complete:

- Core Requirements: 48 hours
- Associated Requirements (Mathematics): 17 hours
- Science Courses: 12-16 hours

Who am I?

Based on the information available, you are Harrison Alexander Leath, a student at Texas Christian University (TCU). You are currently enrolled in the Fall 2024 term and are pursuing a Bachelor of Science degree in Computer Science with a minor in Mathematics. Additionally, you are part of the Honors College and have a General Business Minor.

You have completed courses across various disciplines, including computer science, mathematics, physics, and religion. Your academic performance has been strong, with a cumulative GPA of 3.769 as of the Fall 2024 term. You have also been recognized on the Dean's List multiple

## Summary

**Echelon is an AI-powered chatbot assistant designed as a supplemental advising tool.** Students provide their transcripts, from which Echelon creates personalized profiles highlighting academic progress and strengths or weaknesses. Students can ask questions like "How close am I to completing a psychology minor?" or "Will I do well in Calculus II?". **Built with open-source LLMs, Echelon ensures data privacy by deploying directly on TCU's servers.**



## Future Research

- **Enhanced Vector Search:** adopt advanced embedding techniques to boost the accuracy of Echelon's responses.
- **Scalable Concurrency:** leverage horizontal scaling and GPU resources to support more simultaneous users.
- **Y Combinator AI Startup School:** accepted to this summer's program featuring speakers like Elon Musk, Satya Nadella, Sam Altman, and Andrew Ng to deepen my AI expertise.