

# Abdullah Al Mahmud

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## TECHNICAL SKILLS

**Programming Languages:** C, C++, C#, Java, Kotlin, Python, JavaScript, SQL, Bash

**Frameworks & Tools:** OpenCV, YOLO, TensorFlow, PyTorch, REST APIs, Flask, FastAPI, NodeJS, React, Android Studio, Flutter, Git, Docker, DigitalOcean, Vercel, AWS, Google Cloud, OpenAI, Twilio, Linux, Wireshark, Splunk

**Databases & Vector Stores:** MySQL, PostgreSQL, Firebase, MongoDB, Qdrant, Pinecone

## PROFESSIONAL EXPERIENCE

### Yobo AI

*Software Engineer*

**Ontario, Canada**

*Nov 2023 – Dec 2024*

- Architected a low-latency voice interface using Twilio and OpenAI Realtime APIs, streamlining order-taking workflows and autonomously resolving customer inquiries with 99% accurate tool calls and dynamic prompt.
- Engineered an automated ETL pipeline for menus using LLM structured outputs from images, reducing manual data entry time by 85% while increasing demo-to-trial conversion rates by 38%.
- Developed a scalable microservices architecture using Python and MongoDB that optimized query throughput, handling 10,000+ daily requests and reducing API latency by 150ms.
- Deployed a production-grade audio processing model using PyTorch VAD that minimized false positives by 25%, optimizing conversation flow and raising user retention by 65%.

## LEADERSHIP EXPERIENCE

### Stanford Online

*Section Leader, Stanford CodeInPlace*


**Stanford, CA**

*Apr 2025 – Jul 2025*

- Led weekly 1-1.5 hour sessions on python, and organized pair-programming activities with 23 students.
- Taught data structures & algorithms (e.g., Recursion, Searching, Sorting, Graph) by hands-on coding exercises.


## PROJECTS

### Landsat Lens | *Python, Flask, React, Vercel, Firebase, Leaflet*

 [view](#)


- Visualized paths of Landsat satellites using NASA Celestrak in real-time on an interactive map with Leaflet API
- Fetched real-time Landsat data of specific geographical coordinates with USGS M2M API & overlaid it on map

### StudySync | *Python, Next.js, React, Flask, TypeScript, LangChain, LLMs*

 [view](#)

- Developed AI PDF analysis system (RAG) to extract course schedules, assignments, and grades from documents
- Built dashboard with real-time chat assistant, grade calculator, and task management system in a unified platform

### Astrobee Controller | *Java, Gradle, Tensorflow, LiteRT, ZXing, Docker*

 [view](#)

- Programmed Astrobee Robot movement using Quaternions in the International Space Station with KIBO API
- Trained a Tensorflow model with simulated data to detect 8 tools, & used ZXing Java library to detect AR codes

## HONORS & AWARDS

**Champion, Tidal Hack 2025** | *Developed an app StudySync that placed us 1st among 128 teams* 2025

**Champion, AMD AI PC Track, HackCU 11** | *Quantized 70B LLM to run on a small local AMD NPU* 2025

**Bronze Medalist, World Robot Olympiad** | *Built a self-driving robot-car running on NVIDIA Jetson* 2023

**5th Crew Award, 4th KRPC by JAXA** | *Programmed a robot aboard ISS to compete against 600+ teams.* 2023

## EDUCATION

### Texas Tech University

*B.S. in Computer Science & Mathematics, GPA: 3.91 / 4.0*

**Lubbock, TX**

*Jan 2025 – Dec 2027*

**Relevant Courses:** Computational Thinking & Data Science, Programming Principles, Discrete Computational Structures, Data Structures & Algorithms, Object Oriented Programming, Computer Org. & Assembly Language