

Abhiram Kollipara

(he/him) | abhiramks05@gmail.com | 508-310-3375
akollipara.site | linkedin.com/in/abhiram-kollipara | github.com/AbhiK1212

EDUCATION

University of Massachusetts Amherst

Amherst, MA

Bachelor of Science in Computer Science

Exp Grad Date: May 2026

- GPA: 3.8/4.0
- Relevant Coursework: Data Structures, OOP (Java, Python), Computer Systems, Intro to C, Discrete Mathematics, Reasoning Under Uncertainty, Physical Computing (Arduino), Calculus III, Linear Algebra

EXPERIENCE

Haver AI

Harvard Innovation Labs, Boston MA

Backend Developer Intern

June 2024 - Present

- Developing open-source **full-stack** healthcare predictive analysis application utilizing React, Typescript, and Amazon Web Services
- Architected 10+ RESTful APIs using AWS **API Gateway** and **Lambda** (Node.js, Python), integrating with **S3** and **DynamoDB** (CRUD) for efficient healthcare data management
- Engineered S3-based data archiving solution with intelligent lifecycle rules, reducing long-term storage costs by ~**30%** and optimizing data retention
- Developed high-performance React components for CSV file management, implementing secure uploads of files up to **5 GB** using presigned URLs, data preview capabilities, and dynamic file listing/selection from S3
- Integrated frontend-backend using **Axios** and **Express**, featuring responsive loading states and error handling
- Automated monitoring and maintenance tasks using AWS **CloudWatch** and **EventBridge**
- Collaborating with data engineering team to implement machine learning workflows using AWS **SageMaker**, **Pandas**, and **Scikit-learn**

PROJECTS

WorldWide | *Flutter, GCP (Firebase, Firestore), JSON Serializable, Provider*

- Flutter-based mobile application that challenges users to identify locations around the world from photographs
- Implemented user authentication and real-time data management using Firebase and Firestore
- Utilized JSON Serializable for efficient data parsing and Provider for state management

Spark | *TypeScript, Next, Express, Docker, FFmpeg, Tailwind, Firestore, Firebase, Pub/Sub, Cloud Run*

- Scalable video streaming platform using Next.js, TypeScript and GCP, emulating core YouTube functionalities
- Implemented secure video upload and processing pipeline with Firebase Auth, Cloud Storage, and FFmpeg for multi-format transcoding
- Optimized video workflows using Docker containers on Cloud Run for on-demand processing, and Cloud Pub/Sub for managing asynchronous upload events

DormBuddy | *C++, Next, Express, Node.js, MongoDB, Railway, JWT, API*

- Built smart dorm hub system at HackUMass XI, integrating Arduino sensors, Node.js, and MongoDB to enable real-time monitoring of room status, temperature, and humidity, enhancing shared living experiences
- Developed web app using Next and Express, featuring custom authentication and API for secure data visualization

LEADERSHIP EXPERIENCE

CICS COST (Community Outreach Student Team)

September 2023 - Present

Vice President

- Coordinated volunteer activities, including "Tech Time" event assisting 50+ senior citizens with tech questions
- Taught 'AI for Good' to 25+ students via Minecraft's Hour of Code at a local elementary school

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, TypeScript, HTML, CSS, C, C++ (Arduino), Dart, RobotC

Frameworks/Libraries: React, Express.js, Flutter, Next.js, D3.js, TensorFlow, Pandas, FFmpeg, PapaParse, Daisy UI, Provider, JSON Serializable, Bootstrap, Tailwind CSS

Tools: Git/Github, Docker, Postman, Jupyter Notebook, PyCharm, Visual Studio Code, Axios, Linux

Cloud/Database: Amazon Web Services (AWS), Google Cloud Platform (GCP), MongoDB