

Abhiram Kollipara

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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: Computer Systems, Discrete Mathematics, Physical Computing, Data Structures, OOP (Java, Python), Calculus III, Linear Algebra, Reasoning Under Uncertainty, Intro to C

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 an S3-based file management system 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
- Implemented frontend-backend integration 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**
- Technologies: AWS, Node.js, Python, React, TypeScript, Express, Axios, Sklearn, Postman, PapaParse, Pandas

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, JWT, API

- Arduino Dorm Hub informing roommates of a room's status, temperature and humidity, and security

LEADERSHIP EXPERIENCE/ACTIVITIES

CICS COST (Community Outreach Student Team)

September 2023 - Present

Vice President

- Coordinated volunteer activities, including "Tech Time" event assisting senior citizens with technology questions
- Volunteered at a local elementary school, teaching "AI for Good" through Minecraft's Hour of Code

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

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