




# Abhiram Kollipara

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## EDUCATION

### University of Massachusetts Amherst

Amherst, MA

*B.S in Computer Science*

*Expected May 2027*

- **Courses:** Algorithms, Data Structures, Programming Methodology, Web Programming, Machine Learning, Artificial Intelligence, Data Science, Computer Systems, Databases, Discrete Math, Physical Computing (IOT)

## EXPERIENCE

### Intuit Credit Karma

Charlotte, NC

*Software Engineer Intern*

*May - Aug 2025*

- Engineered swipeable card stack in **Kotlin/XML** for the Android app main dashboard serving **50M+** monthly active users
- Delivered **+0.13%** lift in Retained Monthly Members (RMM) and achieved **20% CTR**— over 10x the industry benchmark
- Architected **GraphQL** to **MVVM** data pipeline to process **500K+** daily API requests, achieving **<200ms** response times
- Launched iOS-exclusive feature on Android across **25+** portal configurations, generating an estimated **\$2M+** ARR impact
- Revitalized Discover Video feature from **-8%** revenue to neutral via **Darwin A/B** testing, raising user engagement by **22%**

### Haver AI

Harvard Innovation Labs, Boston MA

*Software Engineer Intern*

*June - Sept 2024*

- Engineered open-source healthcare predictive analysis platform using **React**, **AWS**, **SageMaker** + **Scikit-learn** ML models
- Architected **10+** RESTful APIs with **API Gateway** + **Lambda** (Node.js/Python), integrating with **S3** and **DynamoDB**
- Optimized S3-based data archiving solution with tiered **Glacier** lifecycle policy, reducing long-term storage costs by **~30%**
- Developed **React** components for secure, large-file uploads (up to 5GB) to **S3** using presigned URLs & preview capabilities
- Automated empty S3 folder cleanup using scheduled Lambda functions via **EventBridge**, streamlining storage management

### Build UMass

University of Massachusetts Amherst

*Software Engineer, Aarti Home Team*

*Jan 2023 - Present*

- Shipped multi-lingual **React Native** app with team of 10 engineers for an Indian NGO supporting 6,400+ abandoned girls
- Improved data load times by **90%** with **MMKV** encrypted storage over AsyncStorage, enhancing UX on weak connections
- Architected **Flask** REST APIs with DynamoDB to serve content, quizzes, and progress for **2,000+** students in pilot testing
- Built **RAG**-powered AI chatbot in Python with **ChromaDB**, delivering context-aware answers from educational resources

## PROJECTS

**FoundU** (Github + Video) | *React Native, Expo, Google Vision API, Node, Express, Multer, Puppeteer, Nodemailer, Cookie-Editor*

- Placed **Top 8** at HackUMass XI, winning the **Wolfram Award (\$1,700)** for a cross-platform mobile app that automates the return of lost student ID cards for **30,000+** students using React Native, Google Vision API, and Nodemailer notifications
- Integrated **Puppeteer** web scraper using cookie-auth to interface with UMass systems, automating student email retrieval

**FinSight** (Github + Video) | *Python, PyTorch, FastAPI, Docker, MLOps (Prometheus, Grafana, MLflow)*

- Fine-tuned **DistilBERT** model on 2,300+ financial headlines, achieving **macro-F1 of 0.9** on 3-class sentiment classification
- Deployed FastAPI microservice for **700+** req/s workloads with **~60ms** latency and 40% faster responses via **Redis** caching
- Built **MLOps** pipeline with **Prometheus/Grafana** for real-time monitoring of KPIs and **MLflow** for experiment tracking

**Spark** (Github + Video) | *TypeScript, Next, Express, Docker, FFmpeg, Tailwind, Firestore, Firebase, Pub/Sub, Cloud Run, CI/CD*

- Engineered scalable video-streaming platform on **GCP** with event-driven microservices, handling **1000+** concurrent uploads
- Automated **FFmpeg** transcoding pipeline on Cloud Run, triggered by Pub/Sub for elastic scaling and metadata storage
- Built Next.js web client with **Firebase Auth** and signed URLs to Cloud Storage for real-time status tracking and analytics
- Integrated **CI/CD** with GitHub Actions for automated Cloud Run deployments, reducing deployment time from 15 to **3 min**

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

- Built IoT dorm hub with **Arduino** sensors + **MongoDB** backend for monitoring door status, temperature, and humidity
- Implemented roommate availability system with RGB LEDs, allowing real-time updates and remote control via web app
- Developed **Next.js** web client with **JWT** auth, enabling remote monitoring, device control, and enhancing shared living

## SKILLS

**Languages:** Python, Kotlin, Swift, Java, TypeScript, SQL, Go, C, C++, Dart, HTML/CSS

**Frameworks/Libraries:** React, Node.js, Next.js, Android SDK, Express, FastAPI, Flask, Django, Spring, PyTorch, Pandas

**Cloud/Database:** Amazon Web Services (AWS), Google Cloud Platform (GCP), MongoDB, MySQL/PostgreSQL, Redis

**Tools:** Git, Docker, CI/CD, Prometheus, Grafana, MLflow, OpenAI, Jenkins, Jira, Linux, JUnit, Espresso, Jest, Splunk, Agile