

Kartik Kapoor

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EDUCATION

University of Houston
M.S. in Computer Science

Houston, Texas
August 2021 - May 2023

- Coursework:** Data Structures and Algorithms, Software Design, Program Analysis and Testing, Programming Languages and Paradigms, Cloud Computing, Game Development, Big Data Analysis, Real-time Systems

Indian Institute of Information Technology
B.Tech in Computer Science and Engineering

Sri City, India
August 2017 – May 2021

SKILLS

Languages: Python, JavaScript, TypeScript, C, C++, C#, SQL

Web: React, Next.js, Vue.js, Angular, HTML, CSS, Tailwind CSS, Material UI, Flutter, Node.js, Express, REST, GraphQL

Database: MongoDB, MySQL, PostgreSQL, DynamoDB

Cloud: Amazon Web Services (AWS), Microsoft Azure, Google Cloud Platform (GCP), Firebase, Supabase

DevOps: Docker, Kubernetes, Jenkins, Ansible, Git, SVN

Certifications: [Amazon Web Services \(AWS\)](#), [Microsoft Azure](#), [Google Cloud Platform \(GCP\)](#), [Kubernetes](#)

WORK EXPERIENCE

Software Engineer
AutomationEdge

July 2023 – Present
Houston, Texas

AIStudio - AutomationEdge Cognitive Services Configuration Portal. This is a cloud and On-Premises application which helps to train NLU, KM service and configure Chatbot web service dialogs.

- Leveraged latest React functionalities along with TypeScript to enhance application robustness and create reusable custom Hooks and utility functions, bolstering modularity, and ensuring seamless integration for future development.
- Collaborated with backend developers to streamline APIs to resolve loading bottlenecks and increase performance, resulting in a 15% boost in data transmission efficiency and overall responsiveness.
- Identified, documented, and tracked bugs while leading unit testing initiatives in a TDD environment working closely with QA resulting in enhanced application stability and a 20% reduction in bugs.
- Implemented Azure DevOps to automate the deployment process, reducing manual intervention and eliminating potential errors during deployment, leading to faster time-to-market for new features and updates.

Software Engineer Intern
X2 Analytics

May 2022 - August 2022
Fremont, California

- Architected and engineered 5+ front-end features for a web application using the Vue.js framework.
- Engineered an optimized tech stack and feature development process in coordination with the CTO, accelerating development timeline by 20%.
- Coordinated with 4 cross-functional teams including UX designers, ML engineers, and back-end engineers to ensure seamless integration of features while maintaining quality standards.
- Excelled in delivering robust software solutions in a fast-paced agile and test-driven development environment.

Software Developer Intern (Team Lead)
Architectica Startup Solutions

June 2019 - July 2019
Udaipur, India

- Led and directed a 4-member intern team in a fast-paced environment through all stages of software development life cycle, culminating in release of an Angular-based web portal for real estate transactions.
- Served as a crucial communication link between the Project Manager and intern team, ensuring alignment on project goals, timelines, and quality standards.
- Worked closely with Software testers to accurately identify, document, escalate, and resolve critical issues.
- Streamlined project workflow by integrating agile processes, contributing to a 10% reduction in overall development time, while rigorously adhering to company standards through proactive participation in design and code reviews.

PROJECT EXPERIENCE

Camera-based heart rate Measurement in the cloud (AWS)

[\(PDF\)](#)

Designed a unique architecture leveraging AWS services to implement a non-contact method of measuring heart rate of multiple individuals with a webcam. The **Kinesis** Video and Data Streams work together with **Rekognition video** to recognize faces and index it using **Amazon S3** and **DynamoDB**. **AWS Lambda** then sends image data via **SQS** to the **Sagemaker** endpoint running an AI model for heart rate measurement and result is output on a client application.

Stadium - A Cloud-based online gaming platform

[\(Website\)](#)

Collaborated with 5 team members to build an online gaming platform for retro games. Games run server-side in a **docker** container and are delivered to users via a web app or Android app built with **React** and **Flutter**, facilitating user interaction with backend services.

DVault - A blockchain-based dead man's switch

[\(GitHub\)](#)

Engineered a secure blockchain-based digital data vault using **RSA encryption** and **InterPlanetary File System (IPFS)**. Data is released via an **Ethereum** smart contract in event of user death. Developed a client app with **React** and specialized **JavaScript** libraries for file encryption, key management, while employing **Solidity** for smart contract integration.

QuazApp - An online quiz portal

[\(Website\)](#)

Leveraged **Next.js** to develop a web platform, enabling teachers to add and manage quizzes. Features include advanced grading with both tabular and graphical result analysis, helping educators identify learning gaps and instructional effectiveness. Students receive performance metrics in similar formats to help their learning process.