# Vedant Amin

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## EDUCATION

**Georgia Institute of Technology**                                                                           Atlanta, GA

*Bachelor of Science in Computer Science*                **GPA: 3.3/4.0**                *August 2019 - May 2023*

**Threads**: Information Internetworks & Intelligence

- **Coursework**: Data Structures & Algorithms, Object-Oriented Programming, Database Systems, Computer Organization & Programming, Artificial Intelligence, Machine Learning, Computer Vision, Computer Networking
- **Extracurriculars**: Google Developer Student Clubs, Big Data Big Impact, BAPS Fellowship
- **Certifications**: AWS Cloud Technical Essentials (AWS), Programming with JavaScript (Meta), Advanced React (Meta)

## EXPERIENCE

**KemNu Inc.**                                                                                                Atlanta, GA

*Software Engineer Intern*                                                            *June 2021 – August 2021*

- Used **React Native** to build the frontend of the KemNu Ads application.
- Employed **Google Firebase Realtime Database** to post and retrieve user's event data, decreasing response times by approximately **38%**.
- Developed activity posting, custom Calendar UI and functionality, group chat interface, and points/rewards features to the KemNu web application using **React.js** coupled with **MaterialUI** and **Day.js** libraries.
- Oversaw and implemented the design for the Event Registration and Group Chat components of the user interface to allow **50+ organizations** and **800+ members** to sign-up for events and communicate within the application.

**Georgia Tech Research Institute (Automotive LiDAR Team)**                                                   Atlanta, GA

*Undergraduate Student Researcher*                                                    *August 2021 – May 2023*

- Designed an automotive LiDAR system in **ROS 2.0** and **Python**, integrating real-time data processing, obstacle detection, and avoidance algorithms, enabling self-sufficient level four autonomous driving.
- Implemented and rigorously tested various **path-planning algorithms**, including **A\* search** and **Dijkstra's algorithm**, with an **average reduction in path length of 20%**.
- Collaborated with mechanical and electrical sub-teams to ensure seamless integration of the LiDAR system into the vehicle's control architecture, leading to a **15% improvement** in vehicle responsiveness and efficiency.

## PROJECTS

**Tower Defense Application**                                                                            *January 2021*

- Video Game Application build using **Android Studios** for the frontend & **Java** for the backend.
- Followed **Agile methodology** and design principles including **SOLID** and **GRASP** principles.
- Built application using Test Driven Development by creating tests through **JUnit**.

**Travel Advisor**                                                                                         *July 2022*

- Created a **React.js** webpage for live updates on nearby restaurants, hotels, and attractions.
- Leveraged **Google Maps and Places API** to accurately determine the user's location and **fetch** location-specific data.
- Designed a responsive **Material UI** based interface for an improved user experience across devices.
- Implemented **data filtering** to refine search results based on preferences such as cuisine type, rating, and price range.

## SKILLS

**Programming Languages**: Java, Python, JavaScript, C/C++, HTML, CSS, SQL

**Software/Applications**: React.js, Git, Docker, AWS, Google Firebase, Linux, Android Studios, React Native, NumPy

**Languages**: English (native), Gujarati (native), Hindi (fluent)