

ARCHIT BUBBER

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Summary

Pursuing bachelor's in Computer Science Dept. of MSRIT, I've interest in reading and working on problems and **Academic Projects and Research**

Academics Projects-

- **Database management tool for college (MSRIT) data-**
 - Developed the front end and an algorithm for early detection of duplicate entry to prevent error generation during insert
 - Developed a functionality to change primary key as when required and updated the access for databases based on departments.
- Developed a Sudoku puzzle project using C.
- Developed a hand cricket game in Java.
- Developed an audio reactive keyboard lights script using Python.

Web Development Projects-

- Developed my Portfolio website:
 - Used w3.css for responsive web designing and developed static website and hosted on GitHub [link](#).
- Developed Live location tracking website TrackMeRide.
 - It provides real time location and speed and uses "MapMyIndia API" for displaying map and marker. It uses React for updating marker position without refreshing page.
 - Developed using custom CSS for responsive web designing and Node.js in backend for processing requests, redirecting, and providing location data to frontend. The app was deployed using Heroku [link](#).

Research Projects-

- Developed an application using Python for programming Neopixel LED's to display custom graphics and images. The matrix can be generated as per user demand style/pattern with provided dynamic button
- **Microprocessor Projects-**
 - **Developed a Tracking device:**
 - Used Sim800l for sending data to servers in form of http requests.
 - Uses Neo6m GPS module for accurate location and speed calculation
 - Provides Realtime tracking and Speed information.
 - Developed in coordination with TrackMeRide Website.
 - **Developed an Emergency Fall Detector wristwatch-**
 - Detected fall by calculating accelerometer and gyro value changes. Further, alerted about the accident to listed people by sending GPS coordinates to respond
 - Used mpu6050, NEO6M, GSM800a and Arduino LilyPad.
 - **Developed a Maze Solving Robot as part of a robotics contest-**
 - Implemented using LRSB algorithm, and calculated path using discrete mathematics equations like $LBL=S$.
 - Aimed to achieve the shortest path in least time.
 - **Developed drone and airplane using Atmel as flight controller-**
 - Built Transmitter and Receiver using Nrf24l01 with ranges up-to 1km and with minimum time consumption and max efficiency.
 - Further used MultiWii source code for Flight Controller and custom tuned PID's for best stability and ack capability for live battery voltage monitoring and safety warnings.

Skills

- **Fundamental Concepts:** Object Oriented Programming & Design, Data Structures such as Graphs, Trees. Algorithms (such as Sorting, Searching, Traversals etc.), Relational Databases and SQL, Mutex, Deadlocks
- **Languages:** Java, C, Python, Arduino
- **Full Stack:** HTML, CSS, JavaScript, Node.js, React JS, w3.css, bootstrap.

Extra-Curricular and Others

- Represented college at VTU south-zonal sports meet in 10km race.
- Core member and organizer of various treks as part of Nature's Club.
- Winner of State Level Bike Championship under 200cc category organised by KTM in 2017.