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 developing faster yet simpler algorithms. I enjoy problem solving in general and identification of missed out cases.

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.
  - Scraped data from Scopus.com to confirm the genunity of published papers and fill the missing information.
- Developed a Sudoku puzzle project using C.
- Developed a hand cricket game in Java.
- Developed an audio reactive keyboard lights script using Python.

Research Projects-

- Developed an application using Python for programming Neopixel LED's to display custom graphics and images.
- **Microprocessor Projects-**
  - **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 discreet 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, Queues, Stacks, Algorithms (such as Sorting, Searching, Traversals etc.), Relational Databases and SQL, Mutex, Deadlocks, Multithreading and scheduling etc.
- **Languages:**
  - Java, C, Python, Arduino
- **Operating Systems:**
  - Mac OSX, Linux, Microsoft Windows XP-10

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.