


# ABHISHEK CHOITHANI

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## Education

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### Xananoids

*ROBOTICS/Electronics/EmbeddedSystem*

**2021 - 2024**

*JECRC JAIPUR*

### Eyantra

*ROS2/GazeboSim/GIT*

**2022**

*IIT BOMBAY*

### Eyantra

*Computer Architecture, VerilogHDL*

**2023**

*IIT BOMBAY*

## Relevant Coursework

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- Data Structures
- Embedded System Debugging, Profiling and Tracing
- RTOS (POSIX)
- Assembly Programing (RISC)
- Reverse Engineering
- Robot Operating System
- Flight Controller Design

## Projects

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### Porting flight controller board to PX4-Autopilot | *Make, C/C++, RTOS*

- Added support for Skystars(a very reasonable price flight controller available in India) to px4. Its A replacement for pixhawk 2.4.8. Yet to commit in main repository as the board is of third party vendor. Also tested with Ardupilot firmware with QGC and Mission Planner

### RISCV CPU Design using Verilog | *RISCV, Verilog, FPGA*

- As a part of eyantra robotics competition I programmed Intel's FPGA. Interfaced ULTRASONIC Sensor, Motor driver, and other sensors and actuators with FPGA and tested CPU design.

### Created debugging tools - fully opensource | *GDB, python*

- Implemnted Debugging tools for ARM-Cortex M4/M7 that are fully opensource from GDB server to GDB machine interface using python(with RTOS awareness). Inspired by Aterion-Embedded Debugging tools and orbcode project

## Technical Skills

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**Languages:** C, Verilog, Python, Assembly

**Libraries/Frameworks:** PX4-Autopilot, Nuttx, GDB-PYTHON ,Ubuntu-linux, FPGA-altera, Git