# Rupesh Gudivada Kodanda Naidu

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Design and Analysis | Verilog| Virtuoso| Automation| Budgeting | Schematic Diagrams | Scheduling |Digital Circuit Design | Research Skills | PCB Layout and Design | Installation | Simulation | Troubleshooting

## FPGA Design Engineer / Hardware design Engineer

**Summary:**

- Extensive knowledge in Digital Design concepts and proficient in object oriented programming.
- Strong scripting skills in Python as well as strong background in ASIC Design flow.
- Capable of independently driving tasks and activities to completion in an organized and timely manner with excellent quality.
- Strong analytical and problem solving skills; excellent verbal and written communication skills, also Low level network protocols.
- Good command on Timing Analysis and pin mapping.
- Worked on Model sim and Intel Quartus prime to design the FPGA in Verilog.
- Have 5 + years of corporate experience in Testing Telecom BSS and exposure to the business workflows.
- Received many awards and rewards from the organization for my efforts and work.

**Education:**

- **University of Houston, Houston, TX:** Master in Electrical and Computer Engineering **Dec 2022**
- **Relevant Coursework:** Advanced Hardware Design, VLSI Design, CMOS Analog Circuits, Advanced Digital Design, RF and Microware Circuits, Integrated Circuit Engineering & Real Time Systems.
- **Anna University, India:** Bachelor in Electronics and communication Engineering **April 2016**

**Technical Skills:**

- **OS:** Windows, Linux and VMware **| Abilities:** Electrical Engineering, Computer Engineering, Electrical Systems
- **Tools:** Cadence Virtuoso, Intel Quartus Prime, Model Sim, CALP, UVM, Katalon Studio, Android Studio, Visual Code, Jenkins, Git.
- **Languages:** Verilog HDL, Python, Assembly code, LTSpice, SQL and Groovy Script.
- **Technologies:** Digital Design, FPGA, RTL Design, Schematic and Layout Design, Hardware Design, IC Fabrication and Automation testing

## Academic Projects

**Mental Math Pattern Game |Platform:** Model Sim, Intel Quartus, TerasIC FPGA Kit **May 2022**

- Designed a game for multi players with ROM based authentication model using FPGA. Here player will be able to generate a random patterns on 7 segment displays which is designed with LFSR generator & has to calculate difference between horizontal & vertical segments glowing.
- Now he has to give his input using load register, now input should be compared with actual difference which is calculated by customized subtractor module. If the input matches with actual difference, the player will get a point & the score will be calculated & tracked using the RAM. Also we have designed a multiplexer to switch between score and a timer displays as we got limited displays.

**Biometrically Secure Database | Platforms:** Arduino and Android **Dec 2021**

- This project is a biometrically secure DB android app that connects to Arduino powered fingerprint sensor via BT. Android app can enroll profiles which triggers fingerprint sensor to capture fingerprint image. Lastly, android app can search database for profile associated with a fingerprint.

**Performance Analysis of 6T SRAM Cell in 180nm CMOS Technology | Platforms:** Cadence Virtuoso and CALP **Dec 2021**

- SRAM is a memory component & is used in various VLSI chips due to unique capability to retain data. This memory cell has become a subject of research to meet demands for future communication systems. In this a 6T SRAM cell is designed by using cadence virtuoso EDA tool in 180nm CMOS technology. Its performance characteristics like power dissipation, delay & power delay product are analyzed.

**Design of Gyroscope using to detect and monitor Strabismus disease | Platforms:** MEMS and COMSOL **March 2016**

- A gyroscope is a device for measuring or maintaining orientation, based on principles of angular momentum. Micro Electro Mechanical System Gyroscopes are gaining popularity because they are highly accurate, less expensive & can be manufactured in large quantities.
- The main aim of project was to design vibrating gyroscope to estimate rate of momentum of eyes of person suffering from strabismus disease. It is also said to be crossed eyes. This gyroscope design is to be placed inside eye which should be compatible with eye tissues.
- This has designed with the material which doesn't harm the eye that means the material of gyroscope should be bio compatible. This gyroscope measures the rate of angular momentum of eye.

## Work Experience

**Test Specialist, CSG International Pvt. Ltd., India** **Oct 2020 – Aug 2021**

- Tested software to meet the requirements of the end user, wrote Test Scenarios, Test cases for SIT operations and execution of same.
- Validated API requests & response for the applications using SOAPUI also automated desktop application functionalities using Sikuli.

**Test Engineer, Altran Technologies Pvt Ltd., India** **April 2019 – Sept 2020**

- Met with the product design team to determine product testing parameters, write test plans and created test cases for the product.
- Trained QA staff & providing technical support when needed, ensured all tests and procedures meet company and industry standards.

**Associate Consultant, Capgemini India Pvt. Ltd., India** **Sept 2016 – April 2019**

- Wrote Test Scenario, test case for CRM (PeopleSoft), Billing (Single View Application), Payment Gateway/Middleware application (EAI)
- Assisted in building Automation framework & developed test suits using Katalon Studio for MY3 web, mobile application and Sprint.