NITHYAKALYANI SAMPATH

POST SILICON VALIDATION ENGINEER

CONTACT

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LinkedIn

PROFILE

5 Years of experience in digital functional validation (includes 1 year of internship)

Texas Instruments [October 2019- Present]:

System Validation Engineer- Working as a system validation engineer for type C power delivery microcontrollers

Intel Corporation [April 2019 – September 2019]:

System Validation Engineer- Worked as a system validation engineer in Thunderbolt/USb4 post silicon validation

Microchip Technology Pvt. Ltd [June 2014 –March 2019]:

Validation Engineer II - Worked on post silicon validation of PIC32 and SAM microcontrollers

EDUCATION

- **MTech** in Digital Electronics and Advanced Communication (2015):
  - GPA: 7.96 MIT, Manipal University.
- **BTech** in Electronics and Communication (2011):
  - 68.4% from GBTU {UTTAR PRADESH}.
- 2007 Maharashtra Board (12th):
  - 71% from R D National Jr. College, Mumbai
- 2005 C.B.S.E. (10th):
  - 80.4% from Rajhans Vidyalaya, Mumbai.

EXPERIENCE

Texas Instruments:

October 2019- Present:

- Responsible for system level testing of USB type C power delivery controllers
- compatibility testing of DUT with customer products
- Test plan and automation framework development

Intel Corporation

April 2019- September 2019

Validation activities at Intel Corporation:

- Responsible for the validation of the Peer to Peer communication between TBT devices
- DMA performance validation and compliance with USB 4.0
- Set up a version control system for the team from scratch

Microchip Technology Inc.

June 2014- March 2019

Pre and Post Silicon Validation of Digital IPs of the PIC32 and SAM Microcontrollers:

- Worked on development of test suites and validation of multiple digital IPs such as CAN, SPI, GPU and validation of the System bus- which involves interaction of multiple IPs, on both silicon samples as well as FPGA emulation platforms.
- Complete ownership of the CAN-FD module validation {plan, testing and report}. This test suite was later adopted across several divisions across the company for its robustness and coverage, especially the error injection testing.
- Characterization of multiple IPs by testing them across process, voltage and temperature.
- Have developed validation plans, functionally tested and presented detailed validation reports of multiple modules- GPU, CAN, CANFD, SSX
- Have worked on layouts for multiple speed boards using Altium designer

KEY SKILLS:

Technical skills:

- **Functional Validation-** experience in developing functional test suites for several digital IPs
    - ♣ Development of Plan/ Report: Complete coverage analysis and test plan development from scratch.
    - ♣ DUT code development: written the functional DUT test code using embedded C for several digital modules
- **Automation**: complete automation testing using Teststand and have experience in automation using Python
- **Software Tools:** Experienced in the use of embedded C, Python, Teststand (basics), Altium (for board design),IAR(for ARM based products), MPlabX(for MIPS based products), Git and SVN version control systems, CAPL coding(for Vector tools), debugging using Trace32, Atlassian tools (Confluence, JIRA),Version control systems like- Git and SVN
- **Hardware**- some experience with high speed board design, experience with hardware debugging, worked with oscilloscopes, power supply, DMM etc.
    - ♣ Worked with the VN1630A and the VH6501 CAN analyzer and error injector and debugging with Lauterbach{JTAG tool
    - ♣ Protocol specific tools: have worked with protocol specific tools for the CAN and CAN-FD.
- Understanding of microcontroller architecture and interaction of IPs
- **Pre-silicon validation-** bring up and testing of several IPs on the FPGA platform. This helped reduce bring up time on actual silicon considerably.
- Other skills include, working on different levels of testing unit/integrated, understanding of the validation framework,

PVT (Process, Voltage and Temperature) testing and electrical testing.

- **Understanding of type C subsystems**- Thunderbolt and USB-c PD

Soft Skills:

- Have worked with cross site teams located in Chandler, Arizona {USA}, Nantes and Rousset {France}
- Work well with other teams for successful collaboration and debug (design, verification and applications)
- Have a good deal of experience presenting validation plans and reports to the product development teams
- Have assisted in recreating and debugging of customer issues
- Have mentored newer people in the team helping them understand processes and assisted with debug.
- Exemplary communication skills – fluent in English, Hindi and Tamil