

# Gahan Saraiya

With over 5+ years of experience as a Firmware Development Engineer at Intel Technology India Pvt Ltd., I possess a strong command over Python, UEFI Firmware, and DevOps, complemented by a thorough understanding of their workflows and architectures. My enthusiasm for open-source contribution and knowledge dissemination reflects my commitment to being a philanthropist in the realm of technology. I am eager to channel my expertise into the architectural design of optimized quantum computing algorithms tailored for multiprogramming environments, as well as to explore the synergies between these cutting-edge technologies and DevOps practices.



## Experience

Jun 2020 - Present

### Silicon Firmware Development Engineer

Intel Technology India Pvt. Ltd.

As the Platform Lead for the next generation client platform and architecture design at USF POL, responsibility span across domains, including Automation Framework, Platform Provisioning, Applied Generative AI & Prompt Engineering for productivity enhancement and Quantum Firmware Design.

The end-to-end Software Development Life Cycle is managed, which includes licensing, legals, and IP planning, as well as applicable Code Security and Static Code Analysis. Additionally, the automated testing of functional validation of Firmware with TeamCity and Jenkins is overseen, and the publishing of artifacts on Artifactory, along with managing webhooks on JIRA.

Jun 2019 - May 2020

### Silicon Firmware Development Engineer Intern

Intel Technology India Pvt. Ltd.

BIOS Firmware Development for Client products with the framework EDK2, UEFI Firmware, Involvement with assessing new debugging solutions and OpenBoard Package

Jul 2017 - Apr 2018

### Software Developer

Quixom Technology

SaaS-Employee management system (chat, surveys, benchmark, analytics...) and Restful API Development; socket programming in python to receive continuous data from IoT device and display chunks of data meaningfully, web portal for rendering dynamic menu content in Kodi

2015 - 2017

### Freelance

Designer

Web Scraping, Designing of banner, memento and certificates



## Education

Jul 2018 - Jun 2020

### M.Tech Computer Science and Engineering, Institute of Technology, Nirma University

PPI: 8.49

Aug 2013 - Apr 2017

### B.E. Computer Engineering, GTU

CGPA - 8.08

Jun 2011 - Mar 2013

### 12th Science, GSHSEB

74.92 %

Jun 2010 - Mar 2011

### 10th, GSHSEB

81.4 %



## Achievements and Extra Curriculum Activity

2023

Firmware Configuration Presentation at UEFI Developers Conference & Plugfest

2019-Present

4000+ reputation on Stackoverflow

2017-Present

Active volunteer on Peer Learning, Cultural and team building activity

2018

Rank #1 for Python challenges on hackerrank

2018

Rank #112 from 2lacs+ participants in Techgig's National Coding Contest 2018

2018

Pluralsight IQ 248 out of 300 for Python

2015-2017

Google Admin system Administration for Institute

2016

Zonal Winner in Cyber Security arranged by Braintech 2017

2014

Technical Event and Placement Coordinator

2014

Establishment of complete network for Department



## Personal Info

### Address

Ahmedabad, Gujarat, India

### E-mail

gahansaraiya@gmail.com

### Date of birth

September 09, 1995

### Website

gahan9.github.io

### GitHub

github.com/gahan9

### Medium

gahan9.medium.com

### LinkedIn

linkedin.com/in/gahan-saraiya

### Twitter

twitter.com/mark\_gahan



## Skills

**Languages** - Python, C, Rust, Shell Scripting, SQL, LaTeX, YAML

**Frameworks** - Edk2, Django, PyCUDA, Pandas, Tkinter, Selenium, Octave

**Tools and Services** - GitHub Actions, Restful APIs, JFrog Artifactory, Teamcity, JIRA, Puppet, Docker, Docker Compose, Jenkins, AWS, GiT, Prezi



## Languages

English

Hindi

Gujarati



## Projects

- 2023 - Present
- **Prompt Engineering and Generative AI for firmware stack**  
**Description:** Solution design for accelerated silicon tape-in with accelerating firmware deliveries
    - Azure Open AI services with GPT 3.5 and GPT 4
    - Summarization of work ticket
    - Code Review against standard static code analysis and common vulnerabilities
    - Code Enhancement suggestion
- 2023 - Present
- **Platform Provisioning with Pre-Production Reference Board**  
**Description:** Platform Provisioning with automating most common features for pre-production server processor such as:
    - Remote BMC and BIOS Firmware Flashing
    - OS Deployment from artifactory
    - Boot to EFI Shell and OS
- 2022 - Present
- **Universal Scalable Firmware**  
**Description:** Architecture design of Platform orchestration layer for Firmware Configuration
    - Motivation of workgroup - [Firmware Configuration – Past, Present, and Future](#)
    - [Firmware Configuration](#)
- 2020 - Present
- **Firmware Automation Framework**  
**Description:** Lead SDL for an automation foundation framework for high scaled volume of silicon devices with edk2 UEFI firmware;
    - seamless configuration of system without any manual intervention for BIOS configuration.
    - SDL activities like legal compliance, security, licensing, static code analysis
    - Continuous deployment and test with jenkins and tox configurations
    - Release Artifact management to JFrog Artifactory using GitHub Actions
    - <https://github.com/intel/xml-cli>
- 2019 - 2020
- **Multiview Video Summarization**  
**Description:** Summarizing video of multiple view angles of egocentric location in to one to generate effective video summary, minimizing overhead to explore multiple cam feed to discover accidents or anomalies.
- 2018
- **Consummating Research Projects using Agile Manifesto**  
**Description:** Utilization of Agile Manifesto for consummating research projects. Enlightening the appropriateness of Scrum for the research projects which is a widely used agile manifesto at present in the software industry.
- 2018
- **Inventory Management and GST Billing for Mobile Shop**  
Full stack Developer  
**Description:** To avoid the headache of manual billing automated GST billing system designed to manage stocks and update according to purchase and sales and generate GST invoice for sales.
- 2017-2018
- **Streaming Box**  
Full stack Developer  
**Description:** An alternate streaming service to DTH and providing easy customized IPTV streaming service based on Kodi (formerly xbmc) Framework
    - Backend Streaming Service, authentication and server security with Django Framework and REST API
    - Web Portal to enable vendor customize Streaming Front-end UI for their users
    - Cross compilation and Native compilation to enable various platform support as Android, Windows and MacOS



## Area of Interest

- Quantum Information Science
- DevOps



## Interests

- Piano
- Chess



## Publications

- 2016
- A Review on Honeybot : Track the Attack. NCCICT, 2016
- 2023
- [Firmware Configuration – Past, Present, and Future](#). Presentation, UEFI DevCon 2023