# Saurabh Srivastava

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## ⚒ Skills

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- **Android Framework (AOSP) Architecture**  • **Android Location Stack**  • Android App Dev
- **Positioning Technologies**  • IoT Architecture  • **ThreadX/FreeRTOS IoT RTOS**  • **TCP/IP Stack**
- Voice over WIFI Telephony Stack  • **WIFI ALG (App Level Gateway) for SIP/RTSP protocols**
- IP Header Compression

- **C/C++**  • **C#**  • **Java** • Python • Rust • Javascript    |    • Blazor .NET WebAssembly PWA  • Angular  • Vue
- ASP.NET  • Firebase  • Sqlite

- **Mentoring Junior Devs**  • **Leading system design**  • **Clear and concise communication**

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## 👔 Experience - **Qualcomm** (2009-present) (13.2 years) (Staff Engineer - since 2020)

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### 🤖 Android Location Stack Development (2016-present)

- Joined Android team during Android 8 (Oreo) upgrade.
- **Designed and Implemented Location stack for Project Treble which brought in major Architecture update with system vendor split.**
- Develop and support new Google requested location features with every Android upgrade.
- Own and support the Location Vendor AIDL interface (IGnss) commercialization for India driven chipsets.
- **Designed and Implemented Precise Positioning feature over a Qualcomm SDK meant to deliver premium features to Third Party Android App developers.**
- Support any location module failures on CTS/VTS validation suites.
- **Enhance and support Android Location SDK which enables chipset OEMs to exercise Qualcomm Location module capabilities.**
- Updated Location module build system from mk to bp build files to adapt to Android's new Soong build system.
- **Guide and train customer engineering teams and occasionally meet with customers on critical location issues.**
- Work with various Android tech teams for location features, especially Data, Telephony, and Core teams.
- **Mentor and guide couple of junior developers across different feature implementations.**
- Mentored several interns for implementing a variety of tools to enhance developer productivity.

### 🕸 ThreadX (IoT) Location Stack Development (2016-present)

- **Designed and implemented the complete location stack on ThreadX RTOS for our IoT platform.**
- **Designed and developed a Reference Application for IoT OEMs to demonstrate concurrent use of GNSS and Data.**
- Enhanced IoT platform time management by developing mechanism for NTP download and injection.
- **Designed and implemented the location stack API for use in a cloud based IoT positioning system.**
- Technically led a team of couple of junior developers to support development and commercialization on IoT platforms.
- **Plan and manage timelines and resources for location feature dev and support for several IoT platforms concurrently.**

### 📶 ALG Development and Voice over WIFI (2012-2016)

- **Designed and developed ALG (Application Level Gateway) implementation for SIP (Session Initiation Protocol) for Qualcomm WIFI router platforms.**
- **Designed and developed ALG implementation for RTSP (Real Time Streaming Protocol).**
- Implemented enhancements and supported commercialization for VoWIFI (Voice over WIFI) module by enabling secure IP path from IMS module to VoWIFI servers.

### 📍 TCP/IP Stack and IP Header Compression (2009-2015)

- Enhanced and maintained the TCP/IP stack on Qualcomm Modem platforms.
- **Implemented and maintained several Header Compression protocols such as CRTP (Compressed Real-Time Transport Protocol), RoHC (Robust Header Compression), and IPHC (IP Header Compression).**

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## 🎓 Education - **B.Tech (Information and Communication Technology)** (DA-IICT) (2005-2009)

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- Won several coding contests  • Maze traversal robot  • Library management system for an NGO  • College Election Portal