

# **Prem Mandal**

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## **Professional Summary:**

Highly skilled QA Test Engineer with 8+ years of experience in Wireless Testing, IoT Devices, Protocol Analysis, and Automation. Proven expertise in manual and automation testing, log analysis, and telecom standards across 4G/5G domains.

## **Key Skills:**

- **Manual Testing:** 4G & 5G MiFi, 5G-IDCPE, 5G-ODU, Modems, IoT Devices
- **Tools:** QXDM, QPST, QCAT, ELT, Logel, Wireshark, Tera Term, Power Monitor Tool.
- **Chipsets:** Qualcomm, Mediatek and Unisoc.
- **Protocols:** 4G LTE, 5G NR, MQTT, HTTP, HTTPS, FTP, DNS, DHCP, TCP, UDP, IP etc
- **Testing Types:** Functional, Sanity, Regression, Throughput, Stability, Feature
- **Automation Testing:** Selenium with Python, API Testing using Postman
- **Operating Systems:** Windows, Linux, Android, iOS

## **Professional Experience:**

### **Marquis Technologies Pvt Ltd – Senior Test Engineer**

**Sep 2020 – Present**

- Conducting Functional, Regression, Sanity, Smoke & Performance Testing.
- Performed protocol and functional testing for 4G/5G & IoT devices.
- Developed and executed test plans for devices and web application testing.
- Worked extensively with log tools (QXDM, ELT, Wireshark) and protocol layers (L2/L3).
- Analyze Layer 2 (MAC, RLC, PDCP) & Layer 3 (RRC, NAS) signaling for LTE & NR networks.
- Perform functional, regression and negative testing for wireless modules and chipsets.
- Executing End-to-end connectivity testing & analysis of NR-5G and LTE-4G call flows.
- Perform testing of network protocols like HTTP, HTTPS, FTP, DNS, DHCP, TCP, UDP, IP etc.
- Validate modem response for 3GPP specific AT commands using Tera Term Tool.
- Monitor and analyze the issues from MTTF Stability Setup so that no issues escape to the field.
- Performed current consumption and firmware upgrade testing on various chipsets.
- Generate and submit test reports, issue summaries, and trace logs for internal reviews.
- Created and submitted detailed bug reports in Bug Tracking Tools like JIRA, Azure & Bugzilla.
- Coordinating with development teams for Bug resolution & improving the existing features.

## **Project 2: - Manual & Automation Testing**

**Aug 2024 – Present**

- Simulate server communication with public/private MQTT brokers.
- Working knowledge of 4G/5G Protocols, Log Analysis, and MQTT with IOT Devices.
- Perform and verify firmware upgrades via JUC and Redband server.
- Perform manual test execution for modem connectivity and power-on behavior.
- Automate repetitive test cases using Python scripts, Tera Term or AT command scripts.
- Develop the test plans and execute the test cases added on the web applications.
- Develop automated test scripts using Selenium WebDriver with Python using PyCharm Tool.
- Use XPath and CSS Selectors effectively to locate dynamic web elements.
- Raise, track, and verify bugs using bug tracking tools like Azure, JIRA & Bugzilla Platforms
- Participate in daily stand-ups and review meetings as part of the Agile process.
- Coordinate with developer teams to resolve bugs from automation failures.
- Performed CRUD operations (GET, POST, PUT, DELETE) to test API using Postman Tool.
- Validated HTTP response codes, response time, headers, and body content for API requests.

## **Neomagic Integrated Systems Pvt. Ltd – Test Engineer**

**Jan 2017 – Aug 2020**

- Coordinated drive test and RF teams for telecom rollout projects.
- Conducted 2G/3G/4G drive testing using TEMS, XCAL and analyzed the data via MapInfo.
- Managed site documentation, scheduling, project tracking and resource allocation.
- Monitored KPIs (RSRP, RSRQ, SINR, CQI), reported network issues & submitted test logs.
- Monitor and update project progress, ensuring adherence to deadlines and milestones.
- Maintain tools and test equipment and ensure proper setup before field deployment.
- Manage resource allocation, task assignments & ensure the workload is balanced.
- Participated in meetings with Project team members discussing progress towards the goal.
- Coordinate with technical teams, field engineers and clients to streamline project execution.
- Submit daily progress reports, test logs, and site-level analysis to the client teams.
- Managed a team of employees providing guidance & support to complete the assigned tasks.
- Maintained PO tracker, raised POs, and ensured compliance for audits and finance teams.
- Maintain a repository of all POs, Work Orders and Invoices for audit and compliance.

## **Certifications:**

- **Certified Automation Test Engineer in Selenium with Python.**
- **LTE & NR Protocol Testing Internship Certified.**

## **Education:**

- **Priyadarshini College of Engineering Nagpur Maharashtra. (BE in ETC: 2011-2015)**
- **Sainik School Bhubaneshwar Orissa. (10<sup>th</sup> & 12<sup>th</sup> CBSE Board – 2008 & 2010)**

