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# NANDANA SHIMOOGA PRASAD

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## WORK EXPERIENCE

### DevOps Software Engineer

5G Access Stratum

- Rolled out first generation CICD for 5G/LTE modem which shortened SDLC and deployment procedures. Improved timeliness and reliability of modem software releases.
- Developed highly scalable REST API servers on internal cloud platform and enabled concurrency by using gunicorn with Flask. These applications process about 100,000 user requests/day.
- Adopted Redis Cache mechanism for handling concurrent user requests on Jenkins and preventing data duplication.
- Employed API authentication for REST API traffic using Kong API Gateway. Additionally, implemented a profiler to generate statistics of API usage, traffic patterns, response times, and errors. Proactively identified performance bottlenecks and key optimizations by monitoring these metrics.
- Improved developer productivity and experience by implementing a python GUI plug-in for Perforce to merge code changes through web interface without requiring workspace access. This plug-in was appreciated by multiple developer teams for user-friendliness.
- Designed a Jenkins tool to monitor SQL queries thereby preventing resource lockup and ensuring high availability of DB and let critical services connect to database.
- Implemented a MQTT tool using RabbitMQ for file path translation from Linux to Windows.
- I have gained valuable hands-on experience with Jenkins, leveraging its powerful capabilities to orchestrate seamless CI/CD pipelines

### Qualcomm Technologies Inc

June 2021 – Present

San Diego, USA

### Software Engineer

Test automation frameworks

- Automated functional verification for a Sennheiser audio module by implementing test cases in python. Reduced manual test effort and turnaround time by 60% for verification.
- Completed functional verification of Sennheiser DECT headsets and office base stations on call scenarios.
- Conducted in-person workshops for customers to demonstrate hardware and its features.
- Conducted seminars and webinars with customers to explaining the test procedures and key features of test setup.

### Mindtree Limited

July 2017 – July 2019

Bangalore, India

## TECHNICAL SKILLS

- **Technology:** Embedded C, REST APIs, Networking, Database Management Systems, Software Engineering, Automation, Django, Polymer, Docker for Linux & Windows
- **Tools:** MYSQL Workbench, JIRA, GIT, Jenkins, Curl, Perforce
- **Coursework:** MITx 6.002x Introduction to Computer Science, Python Foundation Course from Skill Speed.
- **Programming languages:** Python, SQL, C++, C, Java, HTML

## EDUCATION

### Chicago, USA

### University of Illinois, Chicago (UIC)

Fall 2019 – Summer 2021

- Master of Science in Computer Science, GPA: 3.9/4.0
- **Select Coursework:** Advanced Software Engineering, Introduction to Data Science, Advanced Database Management Systems, Computer Networking, Computer Algorithm, Data Mining & Text Mining

### Bangalore, India

### Visvesvaraya Technological University (VTU)

Sep 2013 – May 2017

- Bachelor of Engineering in Computer Science - GPA 3.8/4.0
- Received the best Student award for academic excellence and cultural programs.

## PROJECTS

- **Barebones HTTP web client** – Implemented the GET method and followed the HTTP/1.1 specification, enough to download files with the command line program curl and return the response's bytes using Python.
- **Taxi Ride Sharing** – Implemented an algorithm to maximize the distance saved using ride share while considering walking and delay constraints for passengers. 35%-40% of the total distance (total distance of individual trips) was saved when trips are shared.
- **Domain Name Server (DNS)** – Recreated the functionality of a recursive DNS resolver in Python.