

Lekhika Dugtal

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EDUCATION

Indian Institute of Information Technology Allahabad

Bachelor of Technology in Information Technology (Dual Degree)

Prayagraj, India

August 2016 - May 2021

EXPERIENCE

ABB - Software Engineer

July 2021 – Present

Edge Platform, Ability Genix

Bangalore, India

- Contributed to the development of highly resilient, microservices-based architectures for an **IoT Edge platform** (on-premises gateway solution), supporting 50+ components across both edge and cloud. Utilized **APIs, MQTT, REST, and AMQP queues** to enable seamless communication. Developed and maintained key components using **Shell, .NET, Python, and Angular**, ensuring robust connectivity between edge and cloud systems.
- Managed multiple edge environments across **Kubernetes (AKS EE, K3S), Docker Swarm, and OKE**, while stabilizing the Docker IoT Edge environment, reducing monthly issue reports from multiple to zero for over a year
- Collaborated in the development of **custom Docker and Kubernetes client agents** in C# to manage device onboarding, decommissioning, application deployments, communication, telemetry, and file management tasks, seamlessly integrated with a cloud-controlled UI built using Angular and all connected with APIs and Queues
- Streamlined edge environment setup using Debian packages and scripts, autonomously managing for over 2 years.
- Boosted code coverage from 0% to 90% for critical edge and cloud components, ensuring robust functionality across large codebases. Achieved 100% SonarQube compliance with zero issues, reinforcing code quality and reliability.
- Played a key role in developing OT integration adapters (**OPC UA, Modbus TCP, NMEA**) in C# for seamless interfacing between edge and OT systems, enabling data retrieval from various sources.
- Optimized IoT Edge solutions by implementing advanced **remote monitoring, troubleshooting, and on-edge data analysis**, enhancing system reliability and cloud efficiency. Enabled the deployment of **500+ edge devices in 20+ enterprise customers**, scaling the client base from 4 to 20+ in a short time frame.

Google - Software Engineer Intern

May 2020 – July 2020

Payment's Gateway, Gpay

Hyderabad, India (Remote)

- Explored tech stacks for a scalable payment backend, designed **end-to-end API implementations**, and hosted the platform on **GCP**, including the infrastructure setup for **Kubernetes clusters and SQL instances**
- Engineered microservices for a payments gateway (backend of GPay) using **GRPC-Java with Guice**, while mastering database management with **PostgreSQL and JPA Hibernate**.
- Orchestrated comprehensive testing procedures using **JUnit, Mockito, and H2 in-memory database**, ensuring high code quality and seamless functionality.

Outreachy - Opensource Intern

May 2019 – August 2019

Publiclabs

Florida, USA (Remote)

- Played a pivotal role in **UI overhaul of the plots2 platform**, transitioning from mockups to live implementation with comprehensive revamp of the platform's UI, addressing usability concerns and enhancing the overall UX.
- Diligently handled bug fixes, testing, and documentation, ensuring the stability and reliability of the platform.
- Guided contributors in **open-source** development, fostering collaboration and inclusivity in the community.

PROJECTS

CODE CAPSULE | *Python, Flask, CloudVision API*

Hackathon Grand Prize Winner - 2019

- A three click solution to compile and run your hand written code with **Scan, Edit and Run**.
- Developed REST APIs using Flask to recognize handwritten code from scanned images by leveraging **Google Cloud AI's OCR** (Vision APIs) capabilities and provided an editor for seamless code editing and compilation.

CHIRON | *Python, Django, Git*

Hackathon Runnerup - 2018

- Collaborated in a team of four to develop a comprehensive healthcare platform with **five key features within 36 hours**. Engineered **REST APIs** using **Django** to power Chiron's web-client and **Zulip-bot**, integrating functionalities such as medication management, nutrition tracking, diagnosis assistance, and self-diary logging.

ACHIEVEMENTS

Hackathons 1st RunnerUp - **WMN Hackathon 2019 organised by Devfolio**, Winner - SheHacks Hackathon, 2nd RunnerUp - Hack36, Top 3 in Nova - Designathon, Girl's winner - Open Source Event : Opencode

Awards and Recognitions ABB Rising Star Award 2021, Extra Miler Award (2022, 2023 Yearly, 2024 Q1, Q4)

TECHNICAL SKILLS

Languages and Frameworks: C/C++, C#, .NET, Python, Java, SQL, HTML/CSS, Angular, MSTest

Developer Tools: Git, Docker, Docker Swarm, Kubernetes, Helm, Azure, V2ray, Nginx, Linux, Google Cloud AI

Technologies and Databases: MQTT, OPC UA, Modbus TCP, NMEA, REST APIs, JSON, CrateDB, MongoDB