

NIKHIL GUPTA

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Education

National Institute of Technology(NIT), Rourkela

Sep. 2016 – May 2020

Bachelor of Technology in Computer Science and Engineering, First Class

Rourkela, India

Thesis: Fluid Timeout based Flow Table Management in Openflow enabled SDN [↗](#)

Work & Research Experience

John Deere

August 2020 – Present

Senior Software Engineer

Pune, India

- Assisted various organizations' teams in migrating their applications and data from private(on-prem) to public clouds(AWS & Azure), reducing operational costs by 20% and supporting cloud operations post-migration.
- Developed cloud complexity calculator Web application that calculates migration complexity and categorizes them into low, medium, and high which helps us to get tentative efforts needed to complete the migration.
- Worked on Instance scheduler POC, a solution that reduces operational costs by configuring start and stop schedules for Amazon EC2 and Amazon RDS instances. Also, implemented it across a few application teams for cost savings.
- Created data visualization dashboards using Power BI and Grafana to track cloud activities like funding, approved/ongoing projects, and certifications that saved stakeholders significant time.
- Collaborated with teams across multiple regions for Site Reliability Engineering(SRE) implementation on multiple domains and also conducted a few SRE workshops within the team.

Propelld

May 2019 – June 2019

Web Developer Intern

Bengaluru, India

- Worked on microservice architecture and built cache service API for frequently accessed data that decreased the fetch/compute time for data retrieval achieving a cache hit ratio of over 90%.
- Integrated Consul services for a health checkup and service discovery in a few services.
- Contributed to API's documentation of different microservices used using Swagger API tools.

National Institute of Technology, Rourkela

August 2019 – April 2020

Undergraduate Research Assistant

Rourkela, India

- Proposed fluid timeout mechanism for the incoming data packets that enabled efficient flow table management in OpenFlow enabled Software Defined Networking(SDN).
- Designed and implemented algorithm in Python for addressing rule dependency issues and assigning fluid timeout in the flow table, which decreased rule dependency by 88% by grouping similar rules with changing rule eviction timeout.
- Studied variance in Cumulative Density Flow(CDF) of flow duration and packet arrival time, observed that over 20% of flow expired within 5s, over 15% of flows within 40s, over 80% of time parameter within 0.5s, and over 70% expired within 0.1s.

Projects

Covid Nepal App | Dart, Flutter, Android Studio, Xcode

October 2020

- Created a cross-platform app that helps users get detailed real-time statistics on Covid-19 in Nepal and around the world.
- Added crucial information within the app such as the number of hospitals, available beds, oxygen cylinders, ventilators, contact details, along with local news, covid FAQs, and myths.

Schedule Bot | Python, NLP, Wit.ai, Graph API

August 2019

- Created a chatbot that leverages messenger platform and wit.ai NLP framework, helping students know their particular subject at a specific time when provided with respective section and lab group.

Getweather Script | Python, Selenium, Pandas, Numpy

January 2018

- Created a python script that crawls through a dynamic website and fetches daily, weekly, or monthly weather forecasts of a particular place, lastly uploaded the same script to PyPI foundation as a python package for public use.

Technical Skills

Languages: Python, C/C++, Java, Flutter/Dart, HTML/CSS, JavaScript, Bash, SQL, PHP, Latex

Frameworks: Bootstrap, Flask, NodeJS, ReactJS

Tools: SRE/DevOps, Jenkins, Docker, Git/Github, Jupyter Notebook, AppDynamics, SDN, Mininet

Platform: AWS Cloud, Azure Cloud, Linux/Unix, Heroku, VS code

Awards & Certifications

Budding Talent Award 2021, John Deere

WOW Award, John Deere

AWS, AWS Certified Solutions Architect – Associate [↗](#)

Microsoft Azure, Microsoft Certified Azure Fundamentals [↗](#)

HackerRank, Problem Solving [↗](#)

Leadership & Volunteer Experience

Microsoft Campus Club | Technical Coordinator, NIT Rourkela

April 2018 – April 2019

- Led team of 50+ members, raised funds, conducted tech workshops for 500+ students, and organized global online coding and cryptic hunt events, achieving the highest number of user participation.

National Service Scheme(NSS) | Volunteer, NIT Rourkela

August 2016 – April 2017

- Involved in several volunteering activities within the university and society, including plantation, cleanliness, teaching computers to underprivileged kids, conducting blood donation camps, and yoga classes.

StackOverflow | Contributor, Remote

August 2016 – Present

- Contributed answers to the Stackoverflow's Python community that reached out to and helped 185k+ users.