Shritesh Jamulkar

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Work Experience

Samsung Research & Development Institute, Banglore   Banglore, India
Software Engineer   07/2021 - Present
- LTE System Manager (LSM) Project - In Management Software & Analytics Team
  - Engineered a full-stack JAVA spring-based LSM project, specializing in FM (Fault Module); executed agile development practices and delivered the project on time and under budget.
  - Contributed to Python selenium-based automation testing for the entire Element Management System (EMS) software.
- Research and Patents Works
  - Collaborated with the blockchain team in various research projects in the blockchain space.
  - Enlightened team on advanced topics like ZK-SNKRKs, ZK-STARKs, Bulletproofs, etc and designed various documents on the same.
- Samsung Software Competency Test (SWC) - Advanced Level

The Linux Foundation
Hyperledger Mentorship Program 2021 - Mentee   06/2021 - 12/2021
- Hyperledger - Implement cross chain contract invocation using ServiceMesh way
  - Implemented cross-chain contract interoperability between Hyperledger Fabric and Hyperledger Besu in the 'ServiceMesh' way.
  - Developed cross-chain smart contract on Solidity with a 2-Phase Locking mechanism.
  - Created sidecar relay to felicitate the contract invocation in Java spring framework.

Zenithec Techware   Raipur, India
iOS Developer   04/2019 - 02/2021
- PetBro Business iOS Application
  - Made the complete PetBro Business iOS Application on MVVM Architecture with RxSwift support.
  - Used RxMoya as a Network Abstraction Layer and RxNuxe for image caching and displaying.
  - Published a library to overcome the issue of not hiding the keyboard when clicking on UIViewController.

Allsoft.co   Raipur, Chhattisgarh
Software Developer Intern   07/2019 - 09/2019
- GFI Auction
  - Worked on GFI Auction project based on Angular Frontend framework.
  - Integrated NgRx Store to provide reactive state management.

Research Works

Cross-Chain Contract Invocation with Hyperledger Firefly   01/2023 - Present
In Collaboration with Nikos Kapsoulis (PhD. candidate at National Technical University of Athens)

- Proposed a cross-chain invocation methodology with Hyperledger Firefly supernode.

Blockchain-Based Digital Evidence Management System   07/2020 - 12/2020
Guide: Dr. Preeti Chandrakar (Assistant Professor) at NIT Raipur

- Proposed a digital evidence management system for legal cases to store digital evidence in Hyperledger Sawtooth using IPFS in PBFT consensus mechanism.

Echo Based Real-time Attendance System   08/2020 - 12/2020
Guide: Dr. Jairam Naik (Assistant Professor) at NIT Raipur

- Made an Echo-based attendance system with React GUI using Quiet Modem Project to take attendance of all the available listeners in one shot.

Education & Certifications

Masters of Science, Trinity College Dublin   Dublin, Ireland
Computer Science - Future Networked Systems   09/2022 - Present

Bachelor of Technology, NIT Raipur   Raipur, India
Computer Science and Engineering   08/2017 - 05/2021

- **Associate Android Developer** - Google Developers
- **Classical Cryptosystems and Core Concepts** - Coursera

Key Projects

Dublin Attractions
A Web application to find nearby attractions like artworks and museums from the current location in Dublin city.

- Contributed to the creation of knowledge graphs using ODFs and Ontologies using OpenAPIs and GraphDB.

- Established front-end WEB GUI using React and Nextjs frameworks.

Open Journal
A decentralized platform for researchers to publish their work with fellow researchers and also review the works of other researchers to ensure trust and transparency between all the researchers.

- Shaped Solidity-based smart contracts for Ethereum Blockchain Network.

- Illustrated the front-end Web Interface using the Angular framework.

Lua Parser + Interpreter
A Lua Parser + Interpreter using LPegLabel with an error recovery mechanism.

- Designed a simple compiler based on a specific grammar definition in Lua Programming language with the help of LPegLabel.

HideKeyboardWhenTappedAround(iOS)
A Library for hiding the keyboard when the user tapped anywhere on the screen on iPhone.

- Published an iOS Swift-based library for hiding the keyboard when the user tapped anywhere in the UIViewcontroller.

Technical Skills

Programming Languages:
Proficient in Java, Javascript/Typescript, Python
Familiar with C/C++, Swift, Kotlin, C#, SQL, Bash, Golang, Solidity, Ruby, Lua, Rust.

Web Technologies:
HTML/CSS/SCSS, Nodejs(MERN & MEAN Stack), Django/Flask, REST/Graphql/gRPC/Web Sockets/MQTT, React(Redux/Mobx/Recoil.js) /Angular (NgRx)/ Vue.js

Mobile Technologies:
Native iOS(Swift)/Android(Java/Kotlin), React-Native(Cross-Platform), Flutter(Cross-Platform)

Databases and Message Queue Technologies:
MySQL, Postgres, MongoDB, Cassandra, Redis, InfluxDB, Prometheus, GraphDB, Apache Kafka, RabbitMQ

DevOps:
Version Control: Git, Perforce;
Docker: Docker with docker-compose, Docker Swarm;
Kubernetes: Kubernetes Pods, Deployments, Service, Jobs & Cronjobs, Service Monitors, Ingress Controllers, Load balancers, SSL certificate, Cluster Issures, API Gateways(Traefik); Kubectl, Kubens, Helm, Minikube;
CI/CD: GitHub Actions, Circle CircleCI, Travis;
Monitoring: Grafana (with Prometheus or InfluxDB), Honeybadger.io, Firebase Analytics & Crashlytics;

Cloud/Deployment Platforms:
Google Cloud Platform(GCP): GCP Cloud Storage, GCP Kubernetes Engine, GCP OAUTH APIs, GCP Compute Engine;
Firebase: Firebase Authentication, Firebase Storage, Firebase Firestore Database, Firebase Real-Time Database; Firebase Analytics & Crashlytics; Firebase Admob;
Amazon Web Services(AWS): Lamda functions, S3 buckets, Elastic Kubernetes Service(EKS), Elastic Container Registry (ECR), Elastic Beanstalk(EB), Amazon API Gateways;
Microsoft Azure: Azure Kubernetes Service(AKS), Azure Container Registry (ACR);
Digital Ocean: Digital Ocean Kubernetes, Digital Ocean Droplets, Digital Ocean Serverless - Functions, Digital Ocean Apps;
Vercel & Netlify: Static site deployment, Edge CDNs;

Blockchain Technologies, and Others:
Ethereum Solidity, Hyperledger Fabric / Sawtooth / Firefly / Burrow / Besu, Unity3D.

Position of Responsibility

Technocracy - Technical Committee of NIT Raipur   Raipur, India
Tech Lead   01/19 - 04/21

- Aavartan Android Application
    - Developed NIT Raipur's Tech Fest's mobile Aavartan application in Android which has features like Live event management and in-app networking with 1000+ downloads.
    - Built Android application in MVVC pattern and integrated network caching using Retrofit.
- Kleos2k18 Android Application
    - Developed a Live Quiz application for NIT Raipur's Flagship Triva Event using Django Framework and Android development.
    - Engineered the backend using Django framework and Postgres Database, created 50+ REST APIs using Django REST Framework to be used in the mobile application.
    - Built Android application that supports live quizzes among 1000+ participants and dynamic leaderboard generation.

Talks and Bootcamps

- Given a talk on "Python in Blockchain Interoperability" at Pycon Limerick 2023 on March 25th, 2023.
- Given a talk on "Building insurance application on Corda Blockchain using Java" at Dublin Java User Group(DubJUG) on March 22nd, 2023.
- Given a talk on "Unlocking the power of Knowledge Graphs" in Devfest Raipur in Machine Learning Track with GDG Raipur on December 16th, 2022.
- Given a talk on "What is an API?" in I/O Extended - Web Edition with GDG Raipur on July 10th, 2022.
- Given a talk on "Managing background work on Android" in I/O Extended with GDG Raipur on June 12th, 2022.
- Conducted Android Study Jams in NIT Raipur on course Android Kotlin Fundamentals course on date March 15th, 2021.
- Conducted a Bootcamp at Facebook Developer Circles Raipur on Blockchain-based Decentralized Application development in Ethereum Blockchain on March 20th, 2020.

Achievemnts

- **Finals:** Smart India Hackathon 2019.
    - **Airport-Licensing DAPP:** Developed a decentralized application for Aerodrome Licensing for Airport Authority of India(AAI) for Aerodrome Licensing using Hyperledger Fabric with React Frontend and Android Application for the on-site officer.
- **Winner:** Codeutsava 4.0 Hackathon in Blockchain track.
    - **Airport-Licensing DAPP:** Developed a decentralized application for Aerodrome Licensing for Airport Authority of India(AAI) for Aerodrome Licensing using Hyperledger Composer with React Frontend.
- **Finals:** Smart India Hackathon 2020.
    - **Choukidar Chrome Extension:** Developed a chrome extension to detect Top 10 OWASP Security vulnerabilities in a WebSite.
- **Fourth Winner:** Dot Slash Hackathon held at NIT Surat.
    - **dEmergency:** Developed a decentralized SOS triggering service for medical emergencies.
- **Winner:** Codeutsava 3.0 Hackathon in Blockchain track.
    - **dOrgans:** Developed a blockchain-based dApp in which if a person needs an organ he can register on the platform and wait until a cadaver organ(organ from a person who is dead and willing to donate his organs) is available, all this data will be stored on Ethereum based smart contract so that this sensitive information is tamper-proof.
- **Winner:** Application Development contest held IIIT Raipur.
    - **CG Tourism App:** Developed a React Native-based cross-platform application for Chhattisgarh Tourism Board with Django Backend.