Sagar Duwal

Senior Software Architect (Blockchain & AI)
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Summary

I am a Senior Software Engineer with extensive experience in JAVA/Scala, Python, and Node.js, with a strong background in the Healthcare, Fintech, and Web3 industries. My primary expertise lies in backend development, focusing on Blockchain technologies and Artificial Intelligence. Specialized in designing and developing advanced decentralized applications, my skill set encompasses dApps (backend/smart contracts) and the utilization of blockchain platforms such as Ethereum, Polygon, BASE, SUI, ICON, and Solana for driving business innovation. AI includes traditional descriptive and predictive analytics, NLP, system architecture for AI systems, with a notable emphasis on Generative AI and model fine-tuning. Seeking opportunities to continue leading advancements in Blockchain and AI, I am eager to contribute my unique skills and passion to teams at the forefront of the next wave of digital transformation.

Technical Skills

Languages: Java, Rust, TypeScript, Python, Solidity, Scala
Frameworks: Hardhat/Foundry toolchain, Pytorch, Tensorflow, Keras, Spring, Akka, Mokito
Developer Tools: Kubernetes, Docker, Apache Beam, Hive, Spark, Kafka, Grafana, Kibana, DynamoDB, Mongo
Cloud Platform: AWS, GCP, Fly

Experience

iBriz.ai   Dec 2021 – Present
Senior Software Architect (Blockchain/AI)/Team Lead   *Kathmandu, Nepal*

- Development of descriptive and predictive analytics platform, LLM powered apps, evaluation framework for LLM apps, etc
- Consultation on Aleo Eth Bridge (Aleo to Ethereum)
- Building cross chained assets using LayerZero Protocol
- Build infra and codebases for blockchain projects - Crazy Defense Heroes, Benji Bananas, OpenCampus, etc
- Increase user base by more than double for web2/web3 platform
- Bridging of multiple ERC20 and ERC721/ERC1155 tokens
- Consultation and development on various GameFi Projects - Wondergame, Gangstaverse, Aniches, CoolCats, etc
- Support and consultation on various Defi Projects - Balanced.network, Icon Bridge, BTP

Oyster Financial LLC   Feb 2019 – Nov 2021
Software Engineer   *Kathmandu, Nepal*

- Developed high performance Microservices for Fintech product (Scala/Java/Python)
- Planning, designing, and developing customer facing as well as internal tools for the company.

iBriz.ai   Aug 2018 – Nov 2021
Senior Software Engineer/Team Lead   *Kathmandu, Nepal*

- Designed and developed high performance data management and predictive analytics platform (Python/React)
- Research and product development on EEG data for mindfulness and consciousness of Monk's during meditative state
- Blockchain products (ERC20/NFTs/Games/Webapp) on various blockchain (Ethereum/ICON/Harmony/Celo/Decred/Solana)

Deerwalk Services, Sifal, Kathmandu   Sept 2015 – July 2018
Associate Software Engineer   *Sifal, Kathmandu, Nepal*

- Developed maintainable code for DeerwalkOne Plan Analytics as both Backend and Frontend developer (Java/Grails/Python/Js).
- Reworked on new performant system to increase performance upto 50%
- Lead team of 5, to build predictive and descriptive analytics platform
- Modified existing software to correct errors, upgrades, and improve performance.

Deerwalk Services, Sifal, Kathmandu	May 2015 - Aug 2015

Intern — *Sifal, Kathmandu, Nepal*

Idea Inc. Pvt. Ltd.	2015 - 5 Months

PHP Developer — *Sallaghari, Bhaktapur, Nepal*

- Designed and developed architecture for data management as in-house project.
- Worked for optimization of products - (SMS Gateway/Project Management).

PERSONAL PROJECTS

SMART POT | *Rust*   2024
- Developed AI driven smart pot, that monitors and waters pot
- Blockchain technology to verify authenticity of plant's care history

PRIVATE TRANSACTION ON SUI | *Rust*   2023
- Developed secure platform to do private transaction on SUI blockchain

BLOCKCHAIN EVENT PUSHER | *Python*   2021
- Developed secure, scalable backend service for managing and monitoring smart contracts on EVM-compatible networks, pushing events to webhook/email

VIDEO ANALYTICS PLATFORM FOR PARKING LOT | *Python*   2021
- Working system for counting number of vehicles coming inside parking area

NETWORK THREAT DETECTION USING FEDERATED LEARNING | *Python*   2020
- Worked on Network Threat Detection using Federated Learning with PySyft for enhanced cybersecurity measures on devices connected to network while keeping data private

CREDIT SCORING MODEL FOR TARGETED MARKETING | *Python*   2020
- Generated a credit scoring model for targeted marketing to different campaigns based on location and user group.

SPEECH RECOGNITION FOR HOME AUTOMATION | *Python, RaspberryPi*   2016
- Deployed speech recognition for home automation, controlling electronic devices with RaspberryPi and basic electronics.

KATHMANDU UNIVERSITY PRINTER ADMINISTRATION | *C#*   2014
- Developed a system to provide users with printer access according to their privileges in Kathmandu University, ensuring proper administration over network printers.

KATHMANDU UNIVERSITY SECURITY AUDIT AND OPTIMIZATION   2013
- Performed comprehensive security assessment for Kathmandu University's network and web servers, addressing vulnerabilities and recommending remedial actions

KU-ROVER | *JAVA/Arduino*   2013
- Engineered a real-time video transmission and robot control system.

LEADERSHIP

Organized KU Code Battle in KU ITMeet 2014 - Lead

Lead a Mathematics Exhibition Team at Sainik Awasiya Mahavidhyalaya Silver Jubilee - 2010

EDUCATION

Kathmandu University	Dhulikhel, Kavre, Nepal

Bachelors, KU BOARD — *2011 - 2015*

Birendra Sainik Awasiya Mahavidhyalaya	Bhaktapur, Nepal

High School, HSEB Board — *2010 - 2011*

East Point Academy Sec. School	Bhaktapur, Nepal

SLC, Nepal Board

Participation

Participated in NASA Space App Challenge 2014 – Focus: Gravity

Participated in Hackathon IT Meet 2013 – Project: Pathsala

Volunteered in e-Library Projects for primary and secondary schools

Certifications and MOOCs

Secure and Private AI Scholarship Challenge – Udacity Facebook Scholar

The Complete Ethical Hacking Course: Beginner to Advanced! – Udemy

Machine Learning Foundations: A Case Study Approach – Coursera

Practical Machine Learning by Johns Hopkins University – Coursera

Fastai v1 2017

PyTorch Scholarship Challenge 2018

Microsoft Certification Exam 480 (Programming in HTML5 with JavaScript and CSS3)

Certificate on completion Beginners Ruby on Rails – CodeSchool