ABHISHEK ALFRED SINGH

SOFTWARE ENGINEER EDMONTON, ALBERTA, CANADA +1-825-440-9866

DETAILS

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LINKS

Github

LinkedIn

SKILLS

- Java
- GRPC
- Golang
- Python
- SQL (PostGreSQL)
- C++
- Docker
- Git
- Linux
- Distributed Systems
- Database systems
- Blockchains

PROFILE

I am a Backend Systems Engineer with experience in building high performance microservices and secure transaction processing systems for data and network management systems. I have been building decentralized data management systems in **Java, Golang, Python and C++** since 2018. In addition to that I have more than five years of experience building high performance middleware systems, and webservices at Nokia (2013-2018). I'm a Permanent Resident of Canada and live in Edmonton, Alberta. I'm looking for opportunities as a Software Engineer.

EMPLOYMENT HISTORY

Software Engineer at Alvita Enterprises Inc., Edmonton, Canada
September 2022 — Present

I work on building Alvita Enterprises's digital marketing platform. I also work as a Software Consultant working on Web development projects. As part of my work I have used Python, Flask, Golang, Docker, PostGreSQL (SQL), RocksDB, Apache Kafka, JavaScript, NodeJS, Core Java with SpringBoot, and AWS.

Research Assistant (Remote) at University of California, Santa Cruz and Irvine
September 2018 — January 2023

My work involves building research prototypes for decentralized data management systems. I work at the UCI EdgeLab with Prof. Faisal Nawab from the Information Systems Group at UC, Irvine, California. The following is the list of projects I've completed at UCI EdgeLab.

1. TransEdge [*To be published in Proceedings 26th International Conference on Extending Database Technology, (EDBT 2023)*]- fast read-only transaction processing system for a Byzantine fault-tolerant system. Languages and frameworks used: Java, Python, Git, Bash, AWS, RocksDB, Apache Kafka, Git
2. WedgeBlock [*To be published in Proceedings 26th International Conference on Extending Database Technology, (EDBT 2023)*] - fast and secure offchain logging framework for Blockchain systems providing untrusted offchain applications: Languages and frameworks: Python, Solidity, Ethereum Blockchain, Git
3. Clen - secure transaction processing system for a hybrid decentralized system. Languages and frameworks: Golang, Java, Bash, Docker, Python, Flask, Git

Software Engineer at Nokia, Bangalore, India
July 2013 — August 2018

Worked on designing and building high performance middleware for Nokia's network management system. Languages, frameworks and protocols used: Java, Python, Bash, Docker, Corba, SNMP, XML, SOAP, SpringBoot, J2EE, SFTP, SCP, SSL, Agile, Cross platform systems design

EDUCATION

M.S. Computer Science, University of California, Santa Cruz, California
October 2018 — December 2020

M.E. Information Technology, Bangalore University, Bangalore
October 2011 — June 2013

- Graduated with Distinction

INTERNSHIPS

Intern Member of Technical Staff - Blockchain Engineering at VMware Inc, Palo Alto, California

June 2022 — September 2022

I worked with VMware's permissioned blockchain team. My responsibilities were to build a new testing interface for their open source blockchain library called Concord-bft. Languages and Frameworks used: Python, GRPC, Docker, C++, Cmake

Software Engineering Intern at Alcatel-Lucent (Nokia), Bangalore, India

July 2012 — June 2013

I worked on building prototype protocol conversion API for HNBAP/RANAP to SIP in C++ for Alcatel-Lucent Femtocells. Langauges and frameworks used: Perl, Python, Bash, C++, Make

PUBLICATIONS

TransEdge: Supporting Efficient Read Queries Across Untrusted Edge Nodes

To appear in Proceedings. 26th International Conference on Extending Database Technology (EDBT 2023), Ioánnina, Greece, March 28-31, 2023

WedgeBlock: An Off-Chain Secure Logging Platform for Blockchain Applications

To appear in Proceedings. 26th International Conference on Extending Database Technology (EDBT 2023), Ioánnina, Greece, March 28-31, 2023

PeloPartition: Improving Blockchain Resilience to Network Partitioning

Published in 2022 IEEE Conference on Blockchain (Blockchain)

You've got a Friend in ME (Mobile Edge): Blockchain Processing with Cloud Node Backup

Published in 2022 IEEE Conference on Blockchain (Blockchain)

Analyzing Soft and Hard Partitions of Global-Scale Blockchain Systems

Published in 2022 IEEE Conference on Blockchain (Blockchain)

LiftChain: A Scalable Multi-Stage NFT Transaction Protocol

Published in 2022 IEEE Conference on Blockchain (Blockchain)

WedgeDB: Transaction Processing for Edge Databases, , Santa Cruz, California

Poster published in the Proceedings of the ACM Symposium on Cloud Computing, 2019

Additional Publications

Publications in IEEE Conferences - https://ieeexplore.ieee.org/author/38557615200