Umair Sarfraz

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📍 13187, Berlin

Education

Master of Science, Information Security.   Fall 2018
Comsats University, Islamabad.

Bachelor of Science, Software Engineering.   Spring 2016
Comsats University, Islamabad.

Experience

Experienced Software Engineer   May 2023 - Present (6 mos)
MediaMarktSaturn, Berlin

- Developing MediaMarktSaturn store applications and touchpoints
- Contributing to the development of business automation services at MediaMarktSaturn.

Scientific Researcher   September 2022 - April 2023 (8 mos)
Technical University, Berlin

- Led development of simulation / showcase applications for <u>BeIntelli</u> research project predominantly focused around future of mobility / autonomous driving.
- Led development of a web based application for streaming perception of sensory data for autonomous cars.
- Led design & (ongoing) development of a web based data platform for autonomous driving.
- Participated in the development of a cybersecurity incident & analytics web application.

Technical Lead   January 2021 - August 2022 (1 yr 7 mos)
IOTA Foundation, Berlin

- Led development of Software Development Kits (SDKs) and developer tooling applications for IOTA cryptocurrency network.
- Designed and architected a wallet library/package used by several cryptocurrency exchanges.
- Led design and development of a desktop & mobile wallet *(Firefly)* for managing IOTA payments using Svelte/Electron/Capacitor.
- Led multiple engineering teams of 10 engineers in total responsible for performance evaluation, career development and growth.
- Worked as a Hiring Manager for recruiting and onboarding Software Engineers for the wallet / libraries / tooling / developer experience teams, $0 \rightarrow 8$, with a retention rate of 100%.
- Collaborated across teams cover Design, Engineering and Quality Assurance (QA) to align organisational goals with projects objectives.

Software Engineer   February 2018 - December 2020 (3 yr 2 mos)
IOTA Foundation, Berlin

- Designed and developed a wallet *(Trinity)* for managing IOTA payments using React/React Native/Electron.
- Developed a proof-of-concept mobile application *Selv* around the concept self-sovereign identities.
- Implemented a module (node quorum) for increasing the confidence level of responses from different public nodes in the network.
- Implemented a tool for automatically rescuing blocked IOTA funds.

Software Engineer   July 2016 - January 2018 (1 yr 7 mos)
Wanclouds Inc., Islamabad

- Led the development of a cloud monitoring web application using React.
- Developed and maintained the development and test environments used by front end software engineers.
- Integrated the Jenkins Continuous Integration (CI) systems into the existing deployment processes.
- Provisioned and maintained Continuous Deployments (CD) over Kubernetes cluster using Ansible.
- Developed a test environment for end-to-end testing of a large web application backend using python.

Technology Skills

Programming Languages: JavaScript, Python.
Operations Technologies: AWS/GCP/Azure Cloud Services, Docker, Kubernetes, Jenkins, Ansible, Vagrant, Prometheus, Grafana.
Web Backend Technologies: NodeJS, Express, Flask, Nginx, MongoDB, PostgreSQL, CassandraDB, RealmDB, MySQL, Redis, RabbitMQ.
Web Frontend Technologies: ReactJS, Angular, Svelte, GraphQL, Apollo Client, Redux, Mocha, Jest, Enzyme, Bootstrap, SASS, Gulp, Webpack, Rollup, Bower.
Mobile Technologies: React Native, Ionic, Capacitor.
Desktop Technologies: ElectronJS, Git.

Publications

A. Shahid, U. Sarfraz, M. W. Malik, M. S. Iftikhar, A. Jamal and N. Javaid, "Blockchain-based reputation system in agri-food supply chain," In International Conference on Advanced Information Networking and Applications, pp. 12-21. Springer, Cham, 2020.

U. Sarfraz, M. Alam, S. Zeadally, and A. Khan, "Privacy Aware IOTA Ledger: Decentralized Mixing and Unlinkable IOTA Transactions," Computer Networks, vol. 148, pp. 361-372, 2019.

U. Sarfraz, S. Zeadally, and M. Alam, "Outsourcing IOTA Proof-of-Work to Volunteer Public Devices," Security and Privacy, 2019.

Conference Presentations

U. Sarfraz, "DLT, IOTA and beyond," Higher Education Commission (HEC) Lecture Hall, Islamabad, 2017.

Community Service	Active blood donor at Pakistan Red Crescent Society (PRCS)	
Extra-Curricular Activities	College basketball team, *Captain*	August 2010 - May 2011
	University basketball team, *Captain*	September 2015 - June 2016
	Association of Computing Machinery (ACM), *Member*	January 2016 - May 2016
Languages	Urdu	Native
	English	Fluent
	Punjabi	Proficient
	German	Beginner