Musa Iftikhar

Software Engineer

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Software Engineer generalist with industry and academic research experience. Proficient at quickly learning a variety of software stacks and technologies, architecting applications, mentoring junior engineers and formulating team roadmaps and generating scope. Ability to develop and maintain professional and productive relationships with a variety of cross functional partners for driving change and influence.

SKILLS

Soft Skills: Software Development | Research | Mentoring | Tech Lead | Project Management | Relationship Building

Technical Skills: Python | C++ | Linux | Networking | SQL | Storage Systems | Monitoring & Alerting | Hack | PHP | React | HTML | CSS | JavaScript | Thrift RPC | Java | Chef | Postmortem Reviews | OpenCV | Containers & Virtualization | Cloud Systems

WORK EXPERIENCE

Entrepreneurship, Bay Area, California   2023 – Present

Founder/CTO, Stealth Startup

Exploring pre-seed generative AI ventures as Founding Engineer / CTO.

- Architected SaaS platform to generate social media content for small business owners using OpenAI.
- Built front-end interface for AI assisted automated troubleshooting of enterprise workflows.
- Explored AI for Search Engine Optimization (SEO) to drive up website ranking and visitors.

Meta/Facebook, Bay Area, California   2018 – 2023

Production Engineer, AR/VR Reality Labs (2021 – 2023)

Leading reliability initiatives for Portal and serving as capacity management champion within AR/VR org.

- Spearheaded capacity automation for the largest services in AR/VR saving ~$16M in yearly OpEx for Meta.
- Collaborated on server capacity management processes and tooling for AR/VR, leading to the formation of a new team.
- Engaged with the Portal org for 1+ year to improve overall product reliability – introduced fast health metrics to reduce release bake time by ~93%, increased the signal of over 300 incident reports by incorporating hardware SKU breakdowns within the reports, consulted with the busiest oncall to reduce toil and improve oncall health.
- Improved org culture by serving as new-hire ambassador, PE summit talk champion, and life@ club host.

Production Engineer, Ads Measurement (2019 – 2021)
Creator and owner of full-stack capacity visibility tool. Capacity POC for server capacity management within Ads. Informal tech lead for PE team.

- Developed and launched a full-stack capacity visibility tool to facilitate capacity planning.
- Involved 9 engineers to develop this tool over the course of multiple years with continuous improvements and new features. This tool was consulted by various teams for capacity estimation and planning purposes.
- Served as Capacity Captain for over 2 years for ~35 teams within Ads, ensuring smooth launches with no capacity incidents.
- Built relations and established a 6+ month roadmap as an informal tech lead for our team in the new Ads Measurement engagement to preserve advertiser trust and revenue.
- Managed an intern for 3 months, resulting in a return offer.

Production Engineer, Location Platform & Jobs (2018 – 2019)
Reliability engineer, leading deployments, and capacity POC for various location platform services.

- Setup CI/CD & scaled Jobs backend deployment in 6 months from 0 to 1500+ hosts with 0 major incidents.
- Initiated team engagement for the PE Jobs team by drafting initial OKRs and onboarding 1 junior engineer.
- Reduced toil for Maps and Geocoder services by establishing best PE practices – push time reduced by 92%, incidents reduced by 43%.
- Consulted with various teams to help plan for capacity and prevent future incidents.

Tufts University, Greater Boston Area, Massachusetts   2014 – 2018
PhD Student & Graduate Research Assistant, Network Systems
PhD student and founding member of the NAT research group advised by Prof. Fahad Dogar.
- Proposed a novel design for the TCP/IP network stack, promising up to 75% improvement in tail latency in Datacenter networks.
- Published work as 1st author in ACM HotNets'16 and collaborator in ACM CoNEXT'19.
- Formulated a redesign of data center network topologies to improve fault-tolerance by +3 9s. Presented work to a committee at ACM SIGCOMM London.

Microsoft, Redmond, Washington   2013 (4 months)
Software Development Engineer in Test Intern
Software intern responsible for automating production testing of datamarket.azure.com.
- Implemented framework for safe automated production tests which reduced shipping time by 95%.
- Designed UI dashboards to enable on-call engineers to monitor and manage live production tests.

EDUCATION

Tufts University   Greater Boston Area, MA - 2017
Masters of Science (MS) — Computer Science
Relevant coursework: Computational Geometry | Algorithms | Networks and Protocols | Computation Theory

Lahore University of Management Sciences (LUMS)   Lahore, Punjab - 2014
Bachelors of Science (BS) — Electrical Engineering and Computer Science
Relevant coursework: Artificial Intelligence | Computer Vision | Discrete Mathematics | Topics in Internet Research