BHAVAN GANDHI

DIRECTOR, SOFTWARE ENGINEERING

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SUMMARY

Innovative technology director responsible for leading teams in developing and prototyping end-to-end software solutions. Expert at defining, architecting, building, and delivering software products. Highly adept in big data platforms, data analytics, and algorithm design. Experienced working at telecommunications, cable, and media companies. Co-inventor on 23 issued patents and authored 18 professional and trade publications.

CORE COMPETENCIES:

- Building and leading software product teams that deliver on time and on budget
- Taking ideas from concept to delivering revenue generating products
- Communicating and collaborating across teams and disciplines
- Facilitating Agile / Scrum: Confluence, Jira, Git
- Using architectural constructs: SOA, Web Services, Microservices, IoT
- Developing with: Big Data, Hadoop, RabbitMQ, Kafka, SPARK, SQL, NoSQL, BI , Tableau, ML / AI, Media Analysis, Python, R, AWS, MS Azure
- Deploying with CI / CD: Jenkins, Ansible, Kubernetes, and Docker

WORK EXPERIENCE

COMMSCOPE

2016 - 2020

Senior Director, Software Development, Assurance Products/Analytics

A $2B company providing infrastructure, distribution, and transmission solutions for communications and entertainment networks worldwide. CommScope acquired ARRIS in April 2019.

Reported to Senior Director of Engineering for Assurance Products and responsible for a five-person software and data science team that defined, prototyped, and developed new analytics and insight solutions for network and home products.

- Needed to define product and scope. Delivered two major releases of a new analytics software product for collecting and analyzing device telemetry data from residential gateways to provide reporting, troubleshooting, and performance insight. The product was built for horizontal scalability and deployed on private and public cloud(AWS). Projected to create $5M to $10M/year in new revenue.
- Developed a cloud-based(MS Azure) workforce management analysis and reporting application, which was used to identify and improve technician routing and task inefficiencies, resulting in 15% improvement in efficiency.
- Prototyped Network Capacity Planner for predicting bandwidth usage and recommending network upgrades. Implemented using MS-SQL, Python/R for data processing, and Angular/JS for visualization, and deployed on MS Azure. Applied Machine Learning (ML) techniques that resulted in a pending patent.

ARRIS

2013 - 2016

Senior Director, Advanced Products and Technology

A $7B global telecommunications equipment manufacturing company, providing cable and network operators with data, video, and telephony systems for homes and businesses. Motorola Mobility's Home division was acquired by ARRIS in 2013.

Reported to VP of Engineering and responsible for a 10-person software team based in Chicago and Bay area to develop new Edge and big data analytics solutions for the TV ecosystem.

- Defined, architected, and delivered a cloud-DVR Analytics product to derive user, operational, and network insights from application and services interaction. Hadoop-based big data warehouse technologies were used for the platform. Worked collaboratively with product management to successfully take this from concept prototype to a delivered product in ARRIS' cloud-DVR system offering, creating a new product line.
- Developed analytics and recommendation systems to optimize packaging (statistical multiplexing) and delivery(multicast adaptive bitrates) of IP content. These techniques resulted in dynamically improving bandwidth efficiency and quality of service for delivering content to the consumer.

MOTOROLA MOBILITY

2010 - 2013

Director, Solutions

A $1B manufacturer of consumer electronics, smart mobile devices, and Broadband Network infrastructure as well as customer premise equipment for Cable and Telecommunication service providers. (A Google Company)

Director of engineering responsible for leading and managing multidisciplinary teams (30 people) to create next generation of television experiences and prototypes.

- Pioneered development of TV Everywhere™, a multi-screen TV program discovery and consumption system. This was a cloud-hosted, IP-based content delivery solution that supported network DVR, dynamic ad insertion, and data analytics. Instrumental

creating new business focused on developing software services and supporting applications in TV domain.
- Directed university research at Georgia Tech with responsibility for aligning and setting direction to complement company initiatives. Close interaction resulted in hiring three students as full-time employees.
- Created unified metadata services combining traditional TV guide metadata and related content using data correlation and machine learning. These new services enabled unified content discovery and media fulfillment experiences.

MOTOROLA
1998 - 2010

Senior Engineer and Manager, Multimedia

Motorola, a $15B company, pioneered the mobile device. It had businesses in semiconductors, telecommunications and wireless infrastructure solutions, as well as consumer and enterprise devices and systems

Lead technologist and manager responsible for creating video coding, media analysis, and metadata technologies and software solutions.

- Developed patented error-resilient video codec algorithms, which were adopted and deployed in Motorola's video-capable mobile devices. Patent was recognized as Motorola's Business Patent of the Year in 2007 with an estimated value of $300M.
- Supported Motorola legal team in defensive litigation against asserted JPEG and MPEG patents. Analysis resulted in saving $20M in licensing fees.
- Initiated and managed deep learning research for image and video applications and resulting metadata management systems. This set the foundation for creating new media analysis solutions with supporting patents.

EASTMAN KODAK
1988 - 1998

Development Engineer, Digital Imaging

A $25B image and media company, known for silver-halide and digital imaging products serving Consumer and Enterprise markets

Developer of 2D and 3D digital image processing and compression algorithms for consumer, commercial, and government imaging systems.

- Co-developed a patented DPCM compression technique for a commercial imaging satellite downlink. This was deployed by Space Imaging Inc.(a subsidiary of Lockheed Martin) and is still operational.
- Adapted DPCM-based compression method and was deployed in Kodak's first digital cameras and Apple's Quicktake 100.

EDUCATION

UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

M.S Electrical Engineering

Concentration in Communications & Signal Processing

UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

B.S Electrical Engineering

Edmund James Scholar, Graduated with Honors, and Dean's List