Sunil Murthy

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SUMMARY

Experienced Software Engineer with 8+ years in enterprise software development and cloud computing. Currently Senior Software Engineer at Amazon Web Services, specializing in mobile device management and secure access solutions. Proven track record in developing scalable cloud services, medical imaging software, and IoT systems. Strong background in machine learning, data mining, and distributed systems with expertise in C#, Python, AWS, and modern software engineering practices.

EXPERIENCE

Amazon Web Services (AWS) Sep 2022 - Present
Senior Software Engineer *Greater Seattle Area*

- Working on mobile device management and mobile applications (Sep 2022 - Present)
- Developed AWS Connectivity Client for AWS Verified Access enabling secure access to non-HTTPS protocols (Jan 2024 - Nov 2024)
- Contributing to AWS enterprise engineering solutions and hybrid work environment initiatives

Amazon Web Services (AWS) Jul 2017 - May 2021
Software Developer / Software Developer II *Greater Seattle Area*

- Launched AWS new service "Amazon WorkLink" - secure mobile browsing solution for enterprise customers (Jul 2017 - Dec 2018)
- Developed Alexa for Business platform with enterprise voice solutions and integrations (Jan 2019 - Dec 2019)
- Worked on AWS WorkLink service development and secure mobile browsing solutions for enterprises (Jan 2020 - May 2021)
- Contributed to service architecture, implementation, and scalable cloud solutions

University of Colorado Boulder Dec 2015 - Jul 2017
Graduate Research Assistant *Boulder, CO*

- Developed firmware for YPOD (Arduino Yun + chemical sensors) low-cost air quality monitoring system
- Built MongoDB backend on AWS for real-time data streaming from Arduino Yun WiFi modules
- Integrated YPOD data with OpenAQ real-time air quality database for global accessibility
- Collaborated with Prof. Michael Hannigan on environmental monitoring research

University of Colorado Boulder Aug 2015 - Dec 2015
Graduate Teaching Assistant *Boulder, CO*

- Taught Data Structures in C++11 to undergraduate students under Prof. Rick Osborne
- Conducted lab sessions, graded assignments, and provided student mentoring

Siemens Healthcare Jan 2014 - Jul 2015
Senior Software Engineer *Bangalore, India*

- Designed and developed software components for Syngo.Native medical imaging platform
- Built display manager for DICOM image rendering using Direct3D and WPF
- Prototyped data management modules for medical imaging software
- Performed unit testing and code reviews for critical healthcare applications

Siemens Healthcare Jul 2011 - Jan 2014
Systems Engineer *Bangalore, India*

· Developed and maintained medical imaging software with focus on performance optimization
· Improved system performance by 5% and reduced memory leaks by 100 MB/hr
· Integrated third-party software packages into Syngo.Interventional product
· Provided technical training on Microsoft technologies (WPF, WCF, PRISM) to team members
· Created comprehensive documentation for software components

EDUCATION

University of Colorado Boulder *Aug 2015 - Present*
Master of Science in Computer Science
GPA: 3.6/4.0
Relevant Coursework: Machine Learning, Data Mining, Operating Systems, Object-Oriented Design & Analysis, Algorithms, Network Systems, Software Engineering

Bangalore Institute of Technology *Sept 2007 - Jun 2011*
Bachelor of Engineering in Computer Science & Engineering
GPA: 3.67/4.0

TECHNICAL SKILLS

Programming Languages	C#, Python, C++, Java, JavaScript, R, MATLAB, Perl
Frameworks & Libraries	.NET, WPF, WCF, PRISM, AngularJS, NodeJS, Apache Spark
Databases	MSSQL, MongoDB
Tools & Technologies	TFS, Git, NUnit, Direct3D, AWS, Arduino, Linux, GTK+, Qt
Development Practices	Unit Testing, Design Patterns, Agile Development, TDD

SELECTED PROJECTS

Music Recommender System 2016
Personal Project

· Built hybrid recommendation system combining collaborative and content-based filtering
· Implemented automatic genre classifier using Apache Spark for large dataset processing
· Utilized MLlib for machine learning model construction and evaluation

YPOD Environmental Monitoring Platform 2016
Research Project

· Developed embedded systems platform for mobile air quality monitoring at CU Boulder
· Created configurable design accommodating various sensors for multiple applications
· Implemented real-time data collection and wireless transmission capabilities

Distributed File Server 2015
Academic Project

· Built client/server application supporting file storage across multiple servers
· Implemented user authentication, data encryption using AES, and concurrent user support
· Designed fault-tolerant architecture with load balancing capabilities

HTTP Web Server 2015
Academic Project

· Implemented HTTP 1.0/1.1 web server in C++11 with multi-client support
· Added persistent connection support with HTTP pipelining
· Created configuration-based server deployment system

RESEARCH INTERESTS

Machine Learning, Data Mining, Environmental Monitoring, Software Engineering, Image Processing, Distributed Systems

HONORS & AWARDS

University Fellowship *Aug 2015*
University of Colorado Boulder Computer Science Department

Stability Excellence Award *Jan 2014*
Siemens Healthcare - For identifying critical bottlenecks in project stability

Project Delivery Excellence *Jan 2013*
Siemens Healthcare - Spot award for extraordinary project delivery efforts

Academic Scholarship *Jan 2008*
Honeywell Scholarship for 3 years at Bangalore Institute of Technology

Merit Scholarship *2004*
Prerana Infosys Foundation Scholarship