

# Sunil Murthy

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## SUMMARY

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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

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### 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

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### 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

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

## SELECTED PROJECTS

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### 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

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

## HONORS & AWARDS

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<b>University Fellowship</b> University of Colorado Boulder Computer Science Department	<i>Aug 2015</i>
<b>Stability Excellence Award</b> Siemens Healthcare - For identifying critical bottlenecks in project stability	<i>Jan 2014</i>
<b>Project Delivery Excellence</b> Siemens Healthcare - Spot award for extraordinary project delivery efforts	<i>Jan 2013</i>
<b>Academic Scholarship</b> Honeywell Scholarship for 3 years at Bangalore Institute of Technology	<i>Jan 2008</i>
<b>Merit Scholarship</b> Prerana Infosys Foundation Scholarship	<i>2004</i>