

Sunil Murthy

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EDUCATION

University of Colorado Boulder

Aug 2015 - Present

Master of Science in Computer Science

GPA: 4.0/4.0

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

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
Senior Software Engineer

Jan 2014 - Jul 2015
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
Systems Engineer

Jul 2011 - Jan 2014
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

SELECTED PROJECTS

Music Recommender System
Personal Project

2016

- 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
Research Project

2016

- 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
Academic Project

2015

- 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
Academic Project

2015

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