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 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

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