Sunil Murthy

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GitHub: github.com/sunhick

EDUCATION

University of Colorado Boulder

Aug 2015 - Present

Master of Science in Computer Science

GPA: 4.0/4.0

GPA: 3.67/4.0

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

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 **Development Practices** TFS, Git, NUnit, Direct3D, AWS, Arduino, Linux, GTK+, Qt

Unit Testing, Design Patterns, Agile Development, TDD

EXPERIENCE

University of Colorado Boulder

Dec 2015 - Present

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

Systems Engineer

Jul 2011 - Jan 2014

Bangalore, India

- \cdot Developed and maintained medical imaging software with focus on performance optimization \cdot 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

Academic Scholarship

Prerana Infosys Foundation Scholarship

Merit Scholarship

Honeywell Scholarship for 3 years at Bangalore Institute of Technology

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 \cdot Implemented HTTP 1.0/1.1 web server in C++11 with multi-client support \cdot 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

Jan 2008

2004