

## EDUCATION

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### 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

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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

## EXPERIENCE

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### 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

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

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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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### **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