

# MONIKA DEVANGA RAVI

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## Education

**University of Southern California,**  
Los Angeles, CA (2017-2018)  
M.S (Computer Science) GPA 3.86

**Sri Jayachamarajendra College of Engineering,** Mysore India (2009-2013)  
Bachelor in Engineering  
(Computer Science) GPA 8.96

## Technical Skills

JAVA, C, SQL, HTML, JavaScript, CSS, Bootstrap, PHP, jQuery, XML, JSON, Angular JS, Performance and security testing, Test case automation using selenium, Cross platform/Black box/ white box testing

**Tools:** Agile/Scrum, Hadoop, Google Cloud, AWS, Solr Lucene, OpenCV, Android Studio, Oracle 11g, PostgreSQL, Jenkins, SVN, JIRA, Testlink, SOAP UI, JMeter

## Awards

- Won multiple Dream Dare Do innovation awards at SAP Inc. 2014-15
- Runner-up prize in Schneider Electric Blaze Contest among top 50 teams from prestigious engineering colleges in India

## Course Work

**Graduate Courses:** Multimedia Systems Design, Information Retrieval and Web Search Engines, Web Technology, Database Systems, Software Architecture, Operating Systems

**MOOC:** Applied Text Mining and Applied Machine Learning in Python (Univ. of Michigan), Programming in Python (Univ. of Michigan), Text Retrieval and Search Engines (UIUC)

## Professional Activities

- Women in Science and Engineering (WiSE) member, USC
- Technical Festival Organizer at Linux Campus Club during undergrad study
- Participant in User Interface Development Hackathons at SAP Labs from 2014-16
- Participated in Android App Development and Hackathon events at National Level Technical festival of NITK, Surathkal (India)

## Work Experience

### **Quality Assurance Software Engineer, SAP Labs (July 2014-Dec 2016)**

- Onboarding Project: Developed and tested a Human Resources Online Web Application by performing manual and automation testing on .NET platform using Selenium and JAVA. Managed release cycles during product releases
- Developed a software tool in Visual Basic for monitoring day to day development/testing task
- Project deployment scripts using build automation tools like Jenkins, SVN

### **Software Intern, SuccessFactors: A SAP Company (Aug 2013 – June 2014)**

- Onboarding Product: Tested on online web application by converting customer requirements into Test Design Document and detailed Testcases. Actively collaborated with Product Managers, Cross product team and Dev team.

### **Engineering Intern, IBM, Bangalore (Jan 2013-March 2013)**

- Developed a complete use-case for handling service request in IBM BPM Software

### **Grader Assistant, USC (Jan 2018-Present)**

Information Retrieval and Web Search Engine (CSCI 572)

- Designed and graded homework's, Held office hours and proctored exams

## Projects

### **Multimedia Systems – Image/Video processing in JAVA**

- **Video Summarization Tapestry:** Built an interactive multimedia player (play, stop, pause, forward and backward features) to synchronize audio (.wav) and video (.rgb/.avi) files and to generate a summary of the video as a Tapestry. Techniques implemented include color histogram-based key-frame matching, seam carving, & foreground detection.
- **Image Resizing:** Implemented Gaussian Smoothing, Bilinear Interpolation and Nearest Neighbor interpolation algorithms to resize any given image
- **Image Compression:** Developed a program to compress an image using Discrete Cosine Transform (JPEG) and Discrete Wavelet Transform (JPEG2000)

### **Information Retrieval and Web Search Engines – PageRank based News Search Engine**

- Crawled webpages from news sources, built Inverted Index using Hadoop Map Reduce framework, implemented a search engine by Apache Solr with Lucene and PageRank algorithms. Search engine has AutoComplete, Spell Check and Snippet display features

### **Web Technology - Android and Web Application for Facebook Search Engine**

- Built an android mobile app using Android Material Design and Facebook social networking feature to search for Users, Facebook Groups, Pages and Locations. App enabled sharing of user posts using Facebook Graph Search API
- Created and deployed PHP Script on AWS platform to parse JSON formatted data returned by Facebook Graph Search and Google Geocoding APIs. Interface was rendered using Bootstrap, HTML5, CSS3, jQuery, AngularJS, and Ajax

### **Software Architecture - Social Media Connector (Middleware)**

- Developed an event-based connector with publish-subscribe architecture, which connects different social media like Facebook, LinkedIn, Spotify, Google Maps, and Calendar. Any updates on Facebook will be updated on LinkedIn, Google Maps, Calendar, and Spotify in real time. Connector is built using JAVA, JMS, and Facebook Webhooks

### **Operating Systems - Weenix Kernel in C**

- Built Weenix OS kernel by implementing Scheduling, Mutex lock, Virtual File System, and Virtual Memory features.

### **Bachelors Thesis – Personalized Online Bookstore**

- Built an Personalized Online Bookstore using Bootstrap, PHP, HTML, and CSS. Web interface was developed with publish-subscribe architecture. Personalized automated notifications were sent to a customer via e-mail and text messages (SMS) when a new book is added to the online bookstore